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ABSTRACT

This document provides advance information on the symposia, workshops, and presentations of a conference the purpose of which was to teach about new techniques and methodologies for applying technology as a solution to adult illiteracy. Brief summaries are provided of the content of the symposia, workshops, and presentations. Representative topics include social and economic importance of literacy in the workplace, literacy strategies in the military, teaching the teacher to use technology, using hypermedia in adult literacy programs, teaching reading with a computer, using telecommunications to provide literacy training, combining literacy and employment training for women, creative uses of computers with adult literacy students, interactive video disc and workplace literacy training, using readability-calculations software, family literacy efforts, models for developing statewide literacy networks, a model for staff development and technical support for literacy providers, and microcomputers in the adult learning environment. Other themes are teaching workplace literacy through television, creating job-training opportunities through computers, a video series demonstrating effective teaching practices in adult literacy, and program management. (YLB)

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ED298291

Adult Literacy & Technology National Conference

July 27 - 31, 1988
Pittsburgh, Pennsylvania

CE050835

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

To: **Adult Literacy & Technology Conference Participants**

From: **John Fleischman,**
Adult Literacy & Technology Steering Committee Chair

On behalf of the Adult Literacy and Technology Steering Committee, I would like to welome you to the National Adult Literacy and Technology Conference.

This year's conference participants represent a wide range of perspectives in the field of adult literacy, from local, state and federal agencies to public libraries and private literacy organizations. Despite the diversity of backgrounds and teaching philosophies, it is technology, and the important role it can play in the learning process that brings us all together. Technology becomes our common bond, and through our shared interest in technology we are able to form a greater national team effort to create a literate America.

Technology provides literacy students with dramatic new learning environments. No longer are we bound by the limits of traditional instructional material; we are amidst monumental changes in the ways we teach and process knowledge. You are the pioneers of the learning movement, part of the creative vision in discovering new applications of technology to empower adult learners. You seek solutions to problems, which if not addressed, could have profound negative effects on our society.

Gathered together for the next four days are literacy and technology experts from across the country. During this time you will have the opportunity to network, share , and learn about new techniques and methodologies for applying technology as a solution to adult illiteracy. We are excited about this conference and the forum it presents for the exchange of knowledge and ideas. Whether your goal is to teach, train, or manage the flow of information, there is something here for you.

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Adult Literacy & Technology

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5350 University Avenue
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CONFERENCE HIGHLIGHTS

Everyday:	*Open labs/Crown Club/First Floor
	*Videos/Parkplace/First Floor
Thursday	
10:00 a.m.	**Exhibits Open**
	Pittsburgh Room/Lower Lobby
	Continental Breakfast Sponsored by P/H Electronics
1:00 - 2:30 p.m.	**Opening Session**
	Grand Ballroom, 17th Floor
Greetings:	Jane Nissen Laidley, Adult Literacy & Technology Steering Committee
	Judith Aaronson, Pittsburgh Literacy Initiative
	Jim Simms, Assistant to the Mayor, Pittsburgh
Featured Speaker:	Harvey Long, IBM
Friday	
3:30 - 5:00 p.m.	**General Session**
	Hyatt Hotel, Ballrooms
Greetings:	Bob Clausen, Adult Literacy & Technology Steering Committee
	Don Block, Greater Pittsburgh Literacy Council
Featured speaker:	James Kelley, Apple Computer Inc.
5:00 - 6:00 p.m.	**Wine & Cheese Reception** - Hyatt Hotel
Saturday, July 30	
Noon - 2:00 p.m. :	**Luncheon**
	Westin (location TBA)
Greetings:	Sheila Shaw, Technology Consultant, Adult Literacy & Technology
Door Prizes:	Carole Bartholomew, The Northern Institute
	Adult Literacy & Technology Exhibits Coordinator
Featured speaker:	Terilyn Turner, The Technology for Literacy Center
Saturday, 3:45 - 5:45 p.m.	"Create your Own" Networking Sessions
Sunday, July 31	
10 a.m. - Noon:	**Good-bye Brunch**
Rap for Reading:	Robert Holmes & Steven Anderson, Jr. ("Jake & Butter")
Greetings:	John Fleischman, Adult Literacy & Technology Steering Committee
	John Christopher, Pennsylvania Department of Adult
Education	
Featured Speaker:	Representative William Goodling

* see related Conference handouts for more information on schedule

Thursday, July 28

10:00 a.m.	**Exhibits Open — Pittsburgh Room/Lower Lobby** **Continental Breakfast Sponsored by P/H Electronics**
1:00 - 2:30 p.m.	**Opening Session - Grand Ballroom, 17th. Floor**
Greetings:	**Jane Nissen Laidley, Adult Literacy & Technology Steering Committee** **Judith Aaronson, Pittsburgh Literacy Initiative** **Sophie Masloff, Mayor of Pittsburgh**
Featured Speaker:	**Harvey Long, IBM**

Thursday, Symposia

2:45 - 4:45 p.m.	**Social & economic importance of workplace literacy**
Moderator:	Marciene Mattleman
Panelists:	James B. McNulty, Julius Uehlein, Ray Sholly, Leo McDonough & Richard Fitzsimmons
2:45 - 4:15 p.m.	**Literacy strategies in the U.S. military**
Moderator:	Frances Kelly
Panelists:	Joe Ward, Sherrie Gott & Janice Hart

Thursday, Sessions

Thursday, Group I 2:45 - 3:45 p.m.

Phyllis Barry
Planning for the introduction of technology: who teaches the teacher?

Terry Bullock
Can developmental college students evaluate commercially-prepared software?

Carl Franklin & Linda Bessmer
Using hypermedia in adult literacy programs: a theoretical perspective

Jane Hartley & Rosie Bogo
Teaching reading with a computer: trials & triumphs

Louise Kennard
Using telecommunications and innovative technologies to provide literacy training

Sandra Porter
Wider opportunities: combining literacy and employment training for women

Diane Wagner & Amy Rossman
Project REACH (Reading, Education, and Achievement)

JoAnn Weinberger & Rose Brandt
Creative uses of computers with adult literacy students

Thursday, Group II 4:15 - 5:15 p.m.

Denise Gorsline & W. Robert Schnieders
Domino's Pizza and interactive videodisc: training meets workplace literacy

Elaine Lynch & Huck Roberts
Advantages and limitations of using readability calculations software

Jon Moscow
The instructional computer-skills development project: a progress report

Cookie Moulton & Lee Green
Integrating Laubach, LVA, and computers: a user's guide

Carl Sewell
The SMART ALEX: undistorted voice to teach basic skills

Ann Vescial
Teaching reading to high-risk youth and limited English proficient in a community college setting

Nancy Woods & Claudia Bredemus
Getting started with technology for literacy

Margot Woodwell
Project PLUS

Friday, July 29

Friday, Symposia

9:00 - 11 a.m.:	**The world classroom**
Panelists:	David E. Barbee, Jeff DeGraff & David Susarret
9:00 -11:30 a.m.:	**Technology transfer of Adult Literacy Programs**
Moderator:	Bob Wisher
Panelists:	Karl Haigler, Darcia Bracken, Cynthia Wiles, Melissa Holland & Jack Kolb
9:00 -10:15 a.m. :	**Policy issues related to literacy & how they impact the application of technology**
Moderator:	Bob Clausen
Panelists:	Judith Koloski, Mary Williams & James Parker
9:00 - noon:	**Family literacy efforts: Programs and Practise**
Moderator:	Ruth Nicksie
Panelists:	Eunice N. Askov, Ruth Handel, Ellen Goldsmith, Tom Harris, Margaret Barclay & David Lancey

9 - 10:30 a.m.: **Models for developing statewide literacy networks**
Moderator: Peter Pearson
Panelists: Richard Lavin, Douglas Steward & Christy Bulkeley

Friday, Sessions

Friday, Group I 9:00 - 10:00 a.m.

Janice Biros & Mike Giamo
A model for staff development and technical support for literacy providers

John Friel
Microcomputers in the adult learning environment

Annabelle Lavier
Developing a management system for small programs using Appleworks

William Mason & Ira Mozille
Teaching workplace literacy through television

Barry Mirkin
Using interactive videodiscs technology to teach basic mathematics to adults

Brian Stecher & Ron Solorzano
Designing a computer system for monitoring and reporting adult learners' progress

Friday, Group II 11:00 a.m. - noon

Janice Biros & Mike Giamo
Adult literacy software development and *HyperCard*

John DeWitt
Reconnect adults and high-risk students using computer-managed instruction

Stuart Gedal & Joan Ford
Creating job-training opportunities through computers

Nancy Mullenax
Technology and the arts: a promising approach to instruction in adult literacy

Regina Peruggi & Leslee Oppenheim
Teacher to teacher: a video series demonstrating effective teaching practices in adult literacy

Deborah Young
Integrating software into today's lesson

Friday, Group III 1:30 - 2:30 p.m.

Charles Blaschke
The use of computer based education in the JTPA system

Dot Bonds & Wilda Chadick
Project WILL

Linda Eversole
Discover intensive phonics: making a difference with literacy

M. Tara Joyce
Visual movement in televised blending lessons for adult beginning readers

Lucy MacDonald
A sound approach to literacy

Ray Manak, Robert J. Visdos & Barbara Simpson
Cuyahoga Community College's Adult Learning Center: a partnership in literacy and economic development

Tim Songer & Cindy Johnston
The READY course: interactive computer instruction with digitized audio

3:30 - 5:00 p.m.: General Session - Hyatt Hotel, Ballrooms
Greetings: Bob Clausen, Adult Literacy & Technology Steering Committee
Don Block, Greater Pittsburgh Literacy Council
Featured speaker: James Kelley, Apple Computer, Inc.

5:00 - 6:00 p.m.: Wine & Cheese Reception

Saturday, July 30

Saturday, Symposia

9:00 - 10:30 a.m.
Interactive video for teaching adult literacy: a developmental session
Panelists: John Tibbets, John Fleischman & Shelia Shaw

9:00 - 10:30 a.m.
The Major Computer Systems: A comparison
Moderators: Benita Sommerfield, Terilyn Turner
Panelists: John DeWitt, Cindy Johnston, Bella Hanson & Larry Brown

9:00 - 11:00 a.m.
International literacy programs
Moderators: David Barbee & Judy Brace
Panelists: speakers from USIA's WorldNet

Saturday, Sessions

Saturday, Group I 9:00 -10:00 a.m.

Karen Backlund
Using technology to impart survival skills to parents.

Mary Hogan, Carol Goertzel & Donna Pratt
Staff development and instruction

Ruth Hollenbeck & Evelyn Jorgenson
The use of computer technology in Missouri's ABE/JTPA programs

Linda Stacy & Linnae Juliano
ABE/GED industrial programs: an instructor's point of view

Louise Tomlinson
Vocabulary development: a model for computer-assisted instruction of suffixes and prefixes.

William Vilburg & Ron Blackwell
The emergence of *HyperCard*: Technology for the 90s?

Saturday, Group II 10:30 - 11:30 a.m.

Rita Bean, Rhonda Johnson & Chris Givner
An Evaluation of the implementation of microcomputers in an adult literacy program

Emory Brown & Eunice Askov
Attitudes of teachers and learners toward CAI

Henry Dobson
Repurposing laserdiscs to provide visual linkages for adult learners

June Eiselstein & Pam Makricosta
Libraries and intergenerational approaches to literacy

Anthony & Kathryn Ferralli
Exploring the SV-I connection

Richard Gacka
Computerization of client assessment and literacy programming with an adult psychiatric population

Lucy MacDonald & Richard Sparks
Interactive laserdiscs: what is it all about?

Paul Poledink & Jorie Lester Mark
Fitting the technical system into the corporate culture

Vicki Vance & Marguerite Raaen
Project literacy: an interactive video solution to a national problem

Noon - 2:00 p.m. :	**Luncheon - Westin (location TBA)**
Greetings:	**Sheila Shaw, Technology Consultant, Adult Literacy & Technology**
Door Prizes:	**Carole Bartholomew, The Northern Institute Adult Literacy & Technology Exhibits Coordinator**
Featured speaker:	**Terilyn Turner, The Technology for Literacy Center**

Saturday, Group III 2:15 - 3:15 p.m.

Brett Bixler
Training volunteer tutors to use CAI

William Correll
HyperAnimation: Come face to face with the future

Melvin Howards
The technology of literacy

Annabelle Lavier
Recommended stand alone software for 0-4 grade learners

Lucy MacDonald & Richard Sparks
Writing laserdisc lessons

Elizabeth Metz
Using Consult I: the possibility of consistent treatment/prescription for adult literacy

Huck Roberts
Evolution of the paperless office: database management of a literacy agency

Ronald Sheer & Kathryn Badalich
Simplifying documents and computer-aided design

Macey B. Taylor
CALL in the library

3:45 - 5:45 p.m. "Create your Own" Networking Sessions

Sunday, July 31

10:00 a.m. - Noon: **Good-bye Brunch**
Rap for Reading: **Robert Holmes & Steven Anderson, Jr. ("Jake & Butter")**
Greetings: **John Fleischman, Adult Literacy & Technology Steering Committee**
John Christopher, Pennsylvania Department of Adult

Featured Speaker: **Representative William Goodling**

Pre-Conference Activities:
Wednesday, July 27
ANPA (American Newspaper Publishers Association Foundation)
1:00 - 4:00 p.m.
Parlors B/C, 17th. Floor

Pennsylvania State Coalition
9:00 a.m. - 4:00 p.m.
Parlors E/F, 17th. Floor

TLC (Tutors for Literacy)
10:00 a.m. - Noon
Parkview West, Club Floor

Thursday Symposia

Panel: "Social and economic importance of literacy in the workplace"
Time: Thursday, 2:45 - 4:45 p.m.
Room: Norway, Club Floor

Moderator: Marciene Mattleman, Mayor's Commission on Literacy, Philadelphia
Panelists:
James B. McNulty, National Conference of Democratic Mayors
Julius Uehlein, AF of L/CIO, Pennsylvania
Ray Sholly, Hershey Corporation
Leo McDonough, Small Manufacturers Council
Richard Fitzsimmons, former Commissioner, Wyoming County

This panel will examine social and economic implications of basic-skills instruction in a workplace setting. Issues will be examined from the perspectives of government, business, industry, and labor.

Panel: "Literacy strategies in the U.S. military"
Time: Thursday, 2:45 - 4:15 p.m.
Room: Canada, Club Floor

Moderator: Frances Kelly, Department of the Navy
Panelists:
Joe Ward, U.S. Army Research Institute
Sherrie Gott, Basic-Skills Program Research, Brooks Air Force Base
Janice Hart, Esq., Total Force Training and Education

Basic-skills instruction in the U.S. military is the focus of this panel. Presentations are:
Joe Ward: "Ten years of research in Army basic skills programs (1978-88)
Sherrie Gott: "Scientific literacy in advanced air force works centers"
Janice Hart: "Technologies for the delivery of functional literacy training in the Navy"

Thursday Sessions (2:45 - 3:45 p.m.)

Presenter : **Phyllis Barry**
Strand: **Instruction**
Title: **Planning for the Introduction of Technology: Who Teaches the Teacher?**
Room: **England, Club Floor**

Recent advances in computer technology have made sophisticated computer systems accessible to virtually every educational agency. But while the computers have become readily attainable, the skills needed to use them have not kept pace. What happens when a teacher, administrator, or librarian is confronted with computer technology that he or she has not used in the past? Much has been written about the adaptation of the student to technology, but what about the teacher?

The introduction of computer technology into a previously non-computer environment can bring about major changes not just in how the job is done — it may change the very nature of the job. Before the technology is put in place, careful planning should occur to prepare those professionals who will be using it. This presentation addresses some of the issues that should be considered when educational programs adopt computerized instructional systems.

This presentation is based on research done in 1986 at the University of Illinois on 700 community college professionals. The study attempted to determine what personal and institutional factors facilitated or limited job-related computer use. There were three major groups in the study: teachers, administrators, and support staff (librarians and counselors). The three groups responded differently to the introduction of computer technology. For the purposes of this presentation, I would like to concentrate on the facilitating and limiting factors reported by the teachers since this part of the study seems most relevant.

The findings indicate that the introduction of computer technology is seen largely as having a positive influence of the efficiency and effectiveness of an organization. Differences were noted in terms of the following: whether computer use was voluntary or imposed by the organization, amount of change experienced by the respondent when the technology was introduced, and whether the introduction of the technology changed the nature of the job or changed only the way some things were done.

Results of the study show specific factors that may promote or hinder computer use among individuals. They also point to the need to take into account the learner's situation when providing institutional support for an innovation such as computer technology.

Presenter: **Terry Bullock**
Strand: **Instruction**
Title: **Can Developmental College Students Evaluate Commercially-Prepared Software?**
Room: **Carnegie II, Club Floor**

This presentation will describe the results of student evaluations of commercially-prepared software used in a college developmental reading and study course. Students in three college developmental reading classes at the University of Cincinnati were asked to evaluate a number of recently purchased software programs. The software being evaluated includes comprehension, vocabulary development, speed reading, and critical thinking. In order to determine the effectiveness of these software programs for college students in our

Thursday Sessions (2:45 - 3:45 p.m.)

developmental reading program, the researcher developed both a formative and summative evaluation instrument. These instruments were designed to collect evaluation data in an effort to find out the most appropriate instructional uses for these software programs. Since this was the first time that these software programs were used in our program, it was necessary to obtain as much information as possible to determine future uses of not only these materials but also future software purchases.

This presentation will present the instruments used in the study, the results of the student evaluation, and a discussion of how this data will be used for instruction in the future.

The presentation will include a lecture and a demonstration to show audience participants how the evaluation instruments were developed and the evaluation was conducted. Participants will receive copies of our evaluation instruments.

The session is designed for college developmental reading teachers who are currently using software in their program or who are contemplating using commercially-prepared software in the future.

Presenters: **Carl Franklin & Linda Bessmer**
Strand: **Research**
Title: **Using Hypermedia in Adult Literacy Programs: A Theoretical Perspective**
Room: **Australia, Club Floor**

This presentation will explore a theoretical rationale for using Hypermedia to improve literacy instruction. Recent evidence from cognitive science indicates that the mind is composed of multiple intelligences that process information in a relatively independent fashion. Of the seven intelligences identified by Gardner (1983), four are especially important to literacy instruction: interpersonal, intrapersonal, linguistic, and logical-mathematical. Given a parallel procession model of the learner, how does this affect the design of literacy instruction? The nature, organization, and processing of mental representations are critical to answering this question. Examples using HyperText and Hypergraphics will illustrate how Hypermedia can improve adult literacy through interaction with these representations.

Presenters: **Jane Hartley & Rosie Bogo**
Strand: **Software**
Title: **Teaching Reading with a Computer: Trials and Triumphs**
Room: **Fox Chapel, First Floor**
Vendor Session

Much that we know about adult literacy points to the computer as an ideal tool, but there are difficult decisions to make in developing (or selecting) software. This presentation will review common problems and suggest solutions based on research and actual experiences with computers and adult students.

Problem: Dealing with attitudes
Adults who don't read frequently feel embarrassed.
Adults are wary of environments in which they have previously failed.
Adults bring to class a great variety of abilities and experiences.

Adults often feel that they can't learn.

Adults are goal-oriented.

Solutions: Look for software that gives positive (but honest) feedback. Materials need to give accurate progress reports to the student.

Organize the classroom and the instructional approach to avoid the feeling of a typical classroom.

Select software that allows students to work on different skills and progress at different rates.

Software should provide an immediate and positive feedback for each small step. Materials must be carefully designed to let the student advance from level to level without encountering failure.

Make adult students more responsible for their own instructional growth. Spell out objectives so that students can see their own progress.

Considerations in Instructional Design

Many adults who don't read are learning disabled. Some researchers estimate that 60% of adult illiterates are learning disabled. Software should have features that take learning disabilities into consideration.

Problem: Phonetic Approach or Sight Words?

Research indicates a greater transfer with a phonetic approach, but adults need basic sight words to engage in meaningful reading.

Many adult learners have experienced failure with the phonetic approach. Other students, particularly learning disabled, have difficulty remembering sight words.

Solution: Begin with basic sight words incorporated into meaningful stories. Introduce phonics only after students have had initial success with reading. Find multimedia presentations for learners who have difficulty with sight words. Use the words repeatedly in context. Use language experience stories where learners can hear words repeated over and over in the context of meaningful stories.

Problem: Spelling can be very difficult for learning disability students and they have trouble locating information for comprehension questions.

Solution: Use software to help adults "chain" responses. Use "visual closure" for students who are having difficulty. Look for software that "pulls out" relevant information.

These and other problems will be discussed along with research and some interesting experiences.

Presenter:	**Louise Kennard,**
Strand:	**Evolving Technology**
Title:	**Using Telecommunications and Innovative Technologies to Provide Literacy Training**
Room:	**Parlors E/F, 17 th Floor**

This presentation will explain how a statewide teleconference called "Using Telecommunications and Innovative Technologies to Provide Literacy Training" was organized and implemented. There will also be some video segments of the teleconference as part of the presentation.

Thursday Sessions (2:45 - 3:45 p.m.)

Heightened awareness of the topic of adult literacy has occurred through national coverage on ABC and PBS television networks. On a local level, we hosted the aforementioned conference at the Northern Virginia Community College Teleconference Center on November 16, 1987. It was coordinated by the College Center for Business and Government Services and partially funded by the Adolph Coors Company.

The teleconference was received at 15 downlink sites throughout Virginia as well as Waco, Texas. There were approximately 200 people total in the different audiences from the various receiver locations. The program format included one-way video and two-way audio, which allowed for questions from television audiences.

These were the goals of the program:

1. to showcase literacy programs and resources that exist in various Virginia locations,
2. to exchange available electronic-and technology-based media designed to teach adults how to read,
3. to show providers how to use these materials, and
4. to develop a plan that incorporated the use of these resources and materials. To achieve these goals, leaders from business, education, and the volunteer sector described their literacy program efforts. The teleconference was introduced by Dr. Richard Ernst, president of Northern Virginia Community College, with remarks form Mrs. Jeannie Baliles, wife of Governor Gerry Baliles, and Dr. Johnas Hockaday, the chancellor the Virginia community college system.

A rigorous publicity campaign, begun in April of 1987, continued throughout the summer and fall. Some national journals, as well as local publications, carried the information about the Coors/NOVA teleconference.

Total monies spent were under $2000, not including personnel costs and services provided by Northern Virginia Community College.

Each downlink site was provided with evaluation forms for the teleconference viewers. The overall reaction, from comments and feedback from surveys that were returned from the downlink sites, was positive.

Presenter: **Sandra Porter**
Strand: **Program Management**
Title: **Wider Opportunities: Combining Literacy and Employment training for Women**
Room: **Parkview West, Club Floor**

The Female Single Parent Literacy Project is a multifaceted approach to understanding the problems and needs of low-literate mothers who face severe economic hardships: whose lives are full of the of the complexities of welfare dependency, health concerns, housing crises, low self-esteem, and fear for their children's well-being. Wider Opportunities for Women (WOW) Inc. looks at literacy deficiency as incorporating the need for improved reading, writing, math, and critical-thinking or problem-solving skills. WOW uses a comprehensive instructional approach, including computer-assisted instruction.

Since economic independence and family care are the primary concerns of poor women, we believe it is most effective to teach basic skills in an employment and training setting. In order to document the programmatic components of successful literacy programs, we undertook a four-city, case study project with a parallel focus, group research module, which is what we will present at the conference.

Thursday Sessions (2:45 - 3:45 p.m.)

Presenters: **Diane Wagner & Amy Rossman**
Strand: **Evolving Technology**
Title: **Project Reach (Reading, Education, and Achievement)**
Room: **Oakmont, First Floor**

Project REACH (Reading, Education, and Achievement) is a reading skills improvement program sponsored by the state of New York and the Civil Service Employees Association, Inc. (CSEA) for state employees who are basic- and low-level readers. Project REACH is funded from monies negotiated in a three-year (1985-88) contract between the state of New York and CSEA. The goal of Project REACH is to elevate the reading level of state employees to a minimum of the eighth grade level.

New York State and CSEA undertook this program as a result of a 1986 needs assessment that indicated a need for the development of a basic reading and writing program. Based on these results, the state and CSEA agreed to establish a reading skills program and to experiment with several program delivery methods. All state employees represented by CSEA are eligible to participate. This includes employees from the Administrative Services Unit (clerical workers), the Operational Services Unit (craft and skill workers), and the Institutional Services Unit (patient care workers).

The methods used by Project REACH were selected after we extensively researched the literacy field on a national level. We found, at that time, that no other states were conducting literacy training for state, public sector employees. Consultation with literacy organizations, reading and adult basic-education specialists, and educational directors of established worksite basic-skills programs in the private sector enabled Project REACH to choose program experiments best suited for state employees. The three methods implemented are:

— Literacy Volunteers of America (LVA), one-on-one tutoring;
— IBM/PALS (Principle of the Alphabet Literacy System), an interactive computer method; and
— Basic-skills videos and workbook developed specifically to teach a job skill and the reading ability necessary for the job.

The LVA method consists of state employees who volunteer to tutor for Project REACH. The volunteers complete a two-and-a-half day tutor-training program, become certified, and then are matched with an employee who needs tutoring. The tutor and student meet once a week at a predetermined location for two hours. One hour is provided by the state, and the second hour comes from the student's and tutor's own time. Both student and tutor participate on a voluntary basis.

The IBM/PALS experiment is an interactive computer method. PALS takes place in a classroom, using computers with touch-sensitive screens. The classroom can accommodate eight students at a time. Employees attend the program one hour a day, five days per week for 20 to 30 weeks. During this period, half of the time is spent on touch typing and computer-familiarity skills, while the other half is devoted to reading and writing skills on an IBM Model 30 with a touch-sensitive screen. PALS is a unique program in that it enables an employee to learn three skills at once: reading and writing, touch typing , and familiarity with computers.

The basic-skills video training is a series of six basic-skills videos and an accompanying 48-page workbook that has been developed specifically to teach a job skill. Mental Hygiene Therapy Aides (MHTAs) and Community Residence Aides (CRAs) will receive this on-the-job training that focuses on their daily job tasks. These employees will learn and practice their reading and writing skills by first viewing the videos, and then using the workbook to answer questions, view a glossary of terms, fill out sample client charts and forms, and cover other pertinent information that a MHTA or CRA uses on the job.

As with all New York State training programs, Project REACH will be independently evaluated by an outside consultant. The Center for Advanced Study in Education, at the City University of New York, presently is conducting a full evaluation. In short, New York is a leader in literacy training for public sector, state employees.

We have been contacted by several other states and Canada for information on our literacy-training program for state employees. We are confident and eager to share our experiences with those interested in establishing a similar literacy program.

Presenters: **JoAnn Weinberger & Rose Brandt**
Strand: **Instruction**
Title: **Creative uses of Computers with Adult Literacy Students**
Room: **Parlors B/C, 17th Floor**

The experience of adult literacy programs has shown that computers are valuable educational tools. At the Center for Literacy (CFL), computers are used by student-tutor pairs, by teachers with their classes, and by students, tutors, and teachers outside of the instructional setting. The use of computers exposes students and tutors to a new technology, addresses students' individual goals, enables individualized instructional materials to be developed quickly, and provides a new source of motivation for students, tutors, and teachers. Besides self-paced instruction, computers provide students with immediate feedback. In computer-assisted learning, students and tutors have an opportunity to be co-learners, and students get involved with other students by co-learning and peer tutoring. Computers increase students' instructional hours by allowing them to begin instruction while they are waiting for an appropriate class or tutor and by providing for continuous learning for students who would otherwise be interrupted because of changes in schedules or tutors. In short, computer-assisted learning involves students more fully in their learning process.

While there is limited instructional software developed specifically for low-level adult students, successful reading techniques that lend themselves well to the use in computer-assisted learning are the language-experience approach, cloze method, and duet reading. The language-experience approach can be used with any basic, word processing package. This approach, in which students' words are recorded by a "secretary," encourages students to see reading and writing as an interactive process; it also develops students' own texts, which then become a source of low-level instructional materials. The cloze method, in which the student fills in words deleted from text, encourages an awareness and development of reading and writing strategies and facilitates comprehension and expression. *Missing Letters* is a software package designed specifically for this approach; word processing programs are also appropriate for the cloze approach. Duet reading is the technique in which a tutor or teacher models fluent reading and the student reads along. With voice capability, computers can play this same role for a student when the tutor or teacher is not available.

Writing on the computer permits copying for beginning students, encourages sound writing practices such as editing and rewriting, and provides a spelling check to allay the fears of students who will not write because of limited spelling skills. In this way, many students become contributors to the computer-assisted learning process by writing stories and designing activities for later use for themselves or other students.

The use of computers with adult literacy students has been rewarding. The interactive nature of the computer activities encourages students to see learning as an interactive process

Thursday Sessions (2:45 - 3:45 p.m.)

and to take more responsibility for their own learning. The creative use of computers in adult literacy instruction increases its promise for the future.

Thursday Sessions (4:15 -5:15 p.m.)

Presenters: **Denise Gorsline & W. Robert Schnieders**
Strand: **Evolving Technology**
Title: **Domino's Pizza and Interactive Video Disc: Training Meets Workplace Literacy**
Room: **Oakmont, First Floor**

The presentation and demonstration of "Domino's Pizza and Interactive Videodisc: Training Meets Workplace Literacy" are intended to inform the audience about design instruction when trainees' reading and math skills range from elementary to postgraduate.

The presenters will discuss the advantages of interactive videodisc programs in addressing the effects of functional illiteracy on workplace learning and productivity. They will show how overlaying technical training with literacy instruction can benefit the company, the employee, and the future of technical training.

The goal of the session is to combine principles of literacy instruction, adult learning techniques, and instructional design by making use of interactive videodisc's branching capabilities.

The outline of the session is as follows:

I. Visual Presentation

  a. Problem with workplace literacy's interferences with training and productivity
  b. Solution — IVD overlay training and literacy

II. Explanation with Handouts

  a. Setting Objectives
  b. Addressing average support
  c. Branching

III. Demonstration

  a. Remediation and challenge tracks
  b. Video and audio support
  c. Sensory appeal
  d. Testing

Thursday Sessions (4:15 -5:15 p.m.)

Presenters:	**Elaine Lynch & Huck Roberts**
Strand:	**Document Readibility**
Title:	**Advantages and Limitations of Using Readability-Calculations Software**
Room:	**Parlors B/C, 17th Floor**

Readability software has streamlined the process of obtaining reading levels of documents. What was once a tedious, lengthy process that precluded using more than one or two formulas, now only takes a few minutes to yield grade levels according to many formulas. This time-saving device has enabled readability analysts to focus on interpretation and applications of the results. This presentation will focus on the uses and limitations of readability software, and will include:

* the definition of readability
* a discussion of the formulas used
* an interpretation of results
* a demonstration of readability analyses that PLI has complete on documents for business

Uses and Advantages of Readability Software

The document writer's emphasis should be the communication of ideas and information to the reader. Readability analysis assists writers, educators, and people in the business community in making all materials more readable for the target audience. Advantages of the software include:

* a streamlined process
* results gained from a variety of formulas
* listings of difficult words to be changed

Limitations of Readability Software

Limitations of readability includes the following: the variability of the formula; the lack of consideration given to factors of comprehension and format, which creates the tendency to rely on the score itself (without considering other factors); the outdated nature of several formulas; and the fact that some formulas are not designed to be used with materials for all age groups.

Discussion of the Formulas

This part of presentation includes a discussion of readability formulas, with an evaluation of each according to its:

* rationale and origin
* factors used to obtain reading levels
* validity
* reliability
* applicability

Interpretation of the Scores

Now that computer software has streamlined the readability-analysis process, more emphasis can placed on making documents more readable by adapting vocabulary, sentence structure, syntax, and format to the target audience. Sample reports of readability analyses and recommended changes will be demonstrated to illustrate application of readability-analysis results to documents.

Presenter: **Jon Moscow**
Strand: **Staff Development**
Title: **The Instructional Computer Skills Development Project: A Progress Report**
Room: **England, Club Floor**

This presentation is a progress report on a staff development project about the instructional use of technology. Initiated and coordinated by the Literacy Assistance Center, the project's goal is to significantly broaden the base of technologically knowledgeable, adult literacy practitioners in New York City.

Expertise in instructional computer use is very uneven in the New York City adult literacy community. A small number of people have substantial experience with the technology and thought about and experimented extensively with its instructional use.

However more practitioner lack fundamental knowledge about this technology and its capabilities. Many teachers don't feel comfortable with computers; they have not seriously considered how computers can be integrated into their curricula and instructional approaches.

The project focuses on the creation in a systematic, replicative way of a "critical mass" of knowledgeable practitioners. It consists of a series of workshops, discussions, and activities designed and presented by experienced practitioner and is based on the participation of approximately 20 other teachers who want to become more knowledgeable.

Project design has necessitated focusing on such problems as the need for more staff development time and the need for recognition and credit for professional education. We have also looked at, and attempted to overcome, the obstacles that keep workshop knowledge from being incorporated into everyday practice.

Project conceptualization began in October, 1987, and was in a more detailed design stage in January, 1988. The presentation will include a report on the design process, on the initial spring 1988 presentations, and on the incorporation of the spring's experience into our design of a longer fall series.

Presenters: **Cookie Moulton & Lee Green**
Strand: **Instruction**
Title: **Integrating Laubach, LVA, and Computers: A User's Guide**
Room: **Australia, Club Floor**

Literacy programs most often are manned by volunteer tutors or teaching aides who have a limited background in all of the literacy program components: Laubach or LVA training, adult education, teaching methods, supplementary materials, and computers. Their limited training often makes them hesitant to use new methods or to go outside of an assigned textbook to combine various methods and materials on their own. While many programs introduce assorted computer and print materials in training, new tutors often are so overwhelmed that they cannot make effective use of many items. To help overcome this problem, CALL (Computer-Assisted Literacy Libraries) has developed a guide to integrate these various components. Featuring specific example of software that enhances Laubach- and LVA-based lessons, this workshop will be a demonstration of the computer aspects of that guide, which enables tutors and teachers to move smoothly from the traditional type of instruction to computer-assisted instruction depending on the student's rather than on the tutor's or teacher's background.

Presenter: **Carl Sewell**
Strand: **Software**
Title: **The SMART ALEX: Undistorted Voice to Teach Basic Skills**
Location: **Carnegie II, Club Floor**
Vendor Session

This session will explain and demonstrate the SMART ALEX computerized tutorial-learning system that uses an authentic voice to teach basic reading and language skills. It will begin with a brief history of the system and will explain how a space scientist, a retired professor, and a former teacher/textbook editor came together to help students with special educational needs. Sample lessons in *The SMART ALEX Phonics Program* will be demonstrated to show how lessons on cassette tapes are synchronized with the information presented on the computer screen. Participants will be given an opportunity to try the program on their own. No prerequisite computer knowledge or reading ability is required.

Presenter: **Ann Vescial**
Strand: **Instruction**
Title: **Teaching Reading to High-Risk Youth and Limited English Proficient in a Community College Setting**
Room: **Fox Chapel, First Floor**

Reading is a much more difficult skill to teach than any of the other basic skills. It requires the teacher to constantly monitor, support, assess, and motivate the student. However, a highly successful program has been, developed over several years, which uses computers with appropriate software to enhance the reading and literacy abilities of students who have failed in many other environments.

The program provides a systematic approach for every student. A study of 400 students enrolled in the computer-assisted reading program shows an average reading improvement of two years during a six-month period. The set up, scheduling, software, and all other aspects of the program will be explained in detail. The results, both subjectively and objectively, will be shown. The population base is mainly high-risk youth and second-language learners. Although this is a high school program, it is delivered to students over 17-years-of-age in a continuing education division of a community college.

Presenters: **Nancy Woods & Claudia Bredemus**
Strand: **Program Management**
Title: **Getting Started with Technology and Literacy**
Room: **Parkview West, Club Floor**

For literacy programs just getting into technology, the decisions and information can be overwhelming. In this session, reasons for using technology as well as practical strategies on getting started will be discussed. The experiences of two very different programs in the coun-

Thursday Sessions (4:15 -5:15 p.m.)

try — the Technology For Literacy Center in St. Paul, MN and the Adult Literacy Action of Penn State Beaver Campus in Monaca, PA — will be presented to assist literacy providers in planning for the use of technology. Participants will be encouraged to examine their own resources and needs to see how technology can best contribute to their efforts

Presenter: **Margot Woodwell**
Strand: **Program Management**
Title: **Project PLUS**
Room: **Parlors E/F, 17th Floor**

Project Literacy United States (PLUS) will begin its third year this spring. As a media outreach project on the topic of literacy, it is being undertaken jointly by Capital Cities/ABC and the Public Broadcasting System (PBS).

Plans call for the continuation of the activities of the two years and for adding a focus on our youth with a two-year plan, which will include programming, public awareness raising, and numerous community-based activities confronting the issues of families at risk, looking both at early childhood and at the high school years.

PLUS will be working with its 117 national support organizations and its 336 PLUS task forces across the county as well as with the local affiliates and stations of the ABC and PBS networks.

Friday Symposia

Panel: **The World Classroom**
Time: **Friday, 9:00 a.m. - 11:00 a.m.**
Location: **Parlors E/F, 17th Floor**

Panelists:
David E. Barbee, Center for Advanced Learning Systems, U.S. Department of Labor
Jeff DeGraff, Domino's Pizza Corporation
David Susarret, DMSAT Satellite Communications

Distance technologies, such as satellite communications and computer technologies, have the potential of reaching vast numbers of adult learners for literacy instruction and provide educators with a way of sharing resources through cooperative efforts. Additionally, distance learning provides access to groups for whom traditional, face-to-face instruction is not desirable or feasible. Uses of satellite delivery systems in international, corporate, and multi-classroom environments will be discussed.

Panel: **Technology Transfer of Adult Literacy Programs**
Time: **Friday, 9:00 - 11:30 a.m.**
Location: **Oakmont, First Floor**

Moderator: Bob Wisher, Army Research Institute
Panelists:
Karl Haigler, U.S. Department of Education
Darcia Bracken, National Technical Information Service
Cynthia Wiles, Office of the Governor, State of Michigan
V. Melissa Holland, Army Research Institute
Jack Kolb, Consultant, U.S. Government

This panel will present a broad view of technology transfer policies, procedures, and practices as it relates to adult literacy programs. A panel of experts will describe their experiences with transfer projects and discuss the responsibilities of the government and the receiving agency that promotes a successful transfer of technology. Examples of recent undertakings between industry and the U.S. Army will be highlighted. The role of the National Technical Information Service, of the Department of Commerce, will be discussed along with the opportunities of recent and pending legislation. State government interest in acquiring new technologies to alleviate the economic consequences of illiteracy will be explained. A current example of a new technology for adult literacy will be presented, and the challenges in executing a coordinated transfer to interested parties will demonstrate the difficulties that agencies can face. A historic view of technology transfer will present a birds-eye view of what can be accomplished with creative arrangements and hard work.

Friday Symposia

Panel: **Policy Issues Related to Literacy and how they Impact the Application of Technology**
Time: **Friday, 9:00 - 10:15 a.m.**
Location: **Canada, Club Floor**

Moderator: Bob Clausen, Oregon Department of Education
Panelists:
Judith Koloski, American Association of Adult and Continuing Education
Mary Williams, Department of Adult Education, state of Indiana
James Parker, U.S. Department of Education

Panelists will discuss how policy on federal, state, and organizational levels impacts the use of technology.

Panel: **Family Literacy Efforts: Programs and Practice**
Time: **Friday, 9:00 a.m. - noon**
Location: **Parlors B/C, 17th Floor**

Moderator: Ruth S. Nickse, Family Learning Center, School of Education
Panelists:
Eunice N. Askov, Institute for the Study of Adult Literacy, Penn State University
Ruth Handel, Montclair State College
Ellen Goldsmith, NYC Technical College, City University of New York
Margaret Barclay, Playing to Win
David Lancey, College of Education, Utah State University

The purpose of this panel, Family Literacy Efforts: Programs and Practice is to report on models currently in use to promote adult and child literacy. Presenters will discuss a variety of programs or methods that stress this theme, although they use different programmatic formats, which will be described. Each is effective in reaching particular adult populations in both urban and rural areas. The relationships of the work described will be explored and the implications for practice and research will be discussed by the panelists. The audience will be encouraged to respond during the question and answer period.

Several literacy programs use technology. Innovative computer uses in literacy instruction will be described by Askov, Barclay, and Nicksie. Each will report the purpose, methods, training, software, and hardware needed to implement the programs, the populations served, and the effectiveness of the approach.

Teaching adults to improve their own reading skills so that they can teach their children to read is an objective of each of the programs. Handel and Goldsmith will describe activities used with adults in a community college setting, and Lancey will discuss effective versus less effective strategies which parent readers use when reading to children.

Participants will have the opportunity to attend a two-part presentation — a panel discussion and an accompanying video session that highlights several programs.

Friday Symposia

Panel: **Models for Developing Statewide Literacy Networks**
Time: **Friday, 9:00a.m. - 10:30 a.m.**
Room: **Australia, Club Floor**

Moderator: Peter Pearson, Minnesota Literacy Campaign
Panelists:
Christy Bulkeley, Gannett Foundation
Douglas Stewart, New Mexico Coalition for Literacy
Richard Lavin, Merrimac Education Center

The addition of technology instruction has created a great interest and need on the part of literacy instructors for training in the uses of technology. Some of the training and development of technology networks can best be accomplished through state-level approaches. This panel will describe how state-level literacy networks have been formed and how those networks can be used to do technology training. A national overview as well as state models in Massachusetts, Minnesota, and New Mexico will be presented. Rather than proposing one right approach, the panel will share information about several distinctly different models. Much of the 90 minute session will be devoted to questions and answers as well as group interaction, so that you can begin to develop action plans for your own state's technology network.

Friday Sessions (9:00 - 10:00 a.m.)

Presenters: **Janice Biros & Mike Giamo**
Strand: **Staff Development**
Title: **A Model for Staff Development and Technical Support for Literacy Providers**
Room: **Norway, Club Floor**

Drexel University is the Technical Support Center for the mayor's commission on literacy in Philadelphia. There are some sixty literacy centers in Philadelphia that have computers, and among them, four, different, incompatible microcomputers are used. Most of these centers are staffed by people with other responsibilities along with their literacy tasks, and most of the direct instruction is provided by volunteer tutors. Both groups are essentially computer "illiterate" and do not have the time or inclination to attain a level of technical expertise that would enable them to work independently with their machines or to use them to their fullest potential. Technical assistance is offered to them to ensure that the centers have the necessary support that facilitates extensive use of the computers and the computer's potential. A major component of this support and assistance is staff development for both literacy center coordinators and tutors. This staff development has taken several forms and has expanded as people become more comfortable with their computers. The result has been a comprehensive plan for staff development suited to a variety of needs.

Initially, for the Macintosh computer centers, training was offered in the Mac labs on Drexel's campus. Some 100 staff members and tutors attended three-hour, hands-on sessions that were designed to help them feel comfortable using the Macintosh and to introduce them to some of the software that would be available to them. There were very enjoyable, positive, and "fun" experiences for everyone. After the initial training, site visits were made to reinforce the initial training in groups of five to ten people. They were to work on their own machines in their own settings. After these first site visits were made, subsequent visits were made upon request to provide advanced software training, both for instruction and for center management, and new people were introduced to the technology. In addition, a group of about 15 coordinators met at the university once a month to learn how to develop some of their own materials. Drexel programmers have developed two authoring tools that help instructors lacking programming knowledge develop a variety of instructional materials, with just a couple of hours in instruction and practice in using the programs. After the initial instruction of how to use the tools, sharing sessions were held in which each person was assigned the task of bringing an application created with each tool, and participants presented their work and "swapped" lessons with each other.

This core group also was involved in the development of more complex curriculum materials being done by a programmer using *Hypercard*. As materials were begun, participants had the opportunity to work with them at various stages of development and contribute extensively to the design of the software. Not only helpful for the programmer, this was also beneficial for the literacy delivers because it forced them to analyze the manner in which they were presenting material and focusing on skill development; they also gained a better sense of just how the technology could be used more effectively.

For the non-Macintosh centers, all training was done on-site and in a similar way as described above. Initially, larger groups (10 to 15 participants) were trained, and subsequent training was in very small groups, often one-on-one. Again the goal was to increase the number of tutors and coordinators who were comfortable using the computer with their students and to increase their skills over time. To do this, time was spent again on exploring how word processing could be used creatively as an instructional tool.

The technical support and staff development system we've established is unique and can serve as a model for other collaborative efforts between a college or university, service providers, private industry, and local government. Our model includes all manners of support and development and can be a useful guide for other literacy initiatives.

Presenter: **John Friel**
Strand: **Research**
Title: **Microcomputers in the Adult Learning Environment**
Room: **Parkview East, Club Floor**

A significant body of information has evolved over the last decade related to computers in education. Most of this writing and the research associated with it centers around the application of this technology at the elementary and secondary levels. How does this information apply to adult education? Issues like feedback, program controls, graphics and color, or the user interface may have substantial research based on third- grade or high-school students. But how much of this is appropriate for the adult learner? Adult educators posit a number of theoretical, philosophical, and practical constructs regarding teaching and learning that differ significantly from the traditional pedagogical model. What we know about computers and technology in learning, if generated at the elementary and secondary levels, may or may not be applicable to the adult population.

The purpose of this paper is to bring into focus the research literature in adult education related to computers and technology in the adult-learning environment. This information will be compared with research developed in the the lower levels of education from an androgogical perspective. Implications for policy and development will be addressed. Areas in which research is still needed will be identified. Administrators and practitioners in all facets of adult education will benefit from this information, both in terms of decision making and in the actual implementation of computer-based education and training with the adult population.

Presenter: Annabelle Lavier
Strand: Program Management
Title: Developing a Management System for Small Programs Using *Appleworks*
Room: Fox Chapel, First Floor

This session will focus on the process, implementation, and resources available for small literacy programs that want to computerize their management operation. Participants will receive guides detailing the process from conceptualization to implementation, lists of resources, and templates. Although *Appleworks* is featured in this model, the process is generic to any computer system.

In 1987, the Learning Center at Treaty Oak Community College in The Dalles, Oregon, received five Apple GS s from Apple Computers. The proposal to Apple Computer Inc. contained two provisions, the evaluation of Apple GS software and the development of a transferable, inexpensive, user-friendly management system. This session will be the product of that meeting.

During the demonstration, we will present a model of a successful management system that is transferable, inexpensive, and can be developed by computer novices. We will also demonstrate and provide participants with templates that will serve as development guides that can be used directly. Also, participants will be see the sequential steps from the conceptualization to operation of a management system.

Presenters: William Mason & Ira Mozille
Strand: Evolving Technology
Title: Teaching Workplace Literacy Through Television
Room: Carnegie II, Club Floor

Our presentation clearly demonstrates how the unique capabilities of direct broadcast satellite technology can be used to address the pressing issue of workplace literacy. Specifically, we will:

— introduce the AEtna Institute's learning-design process for delivering its business and writing course via direct broadcast satellite to AEtna employees in remote sites country-wide and

— describe the AEtna Institute's Effective Business Skills School, a curriculum grounded in functional literacy.

We will lead off with an overview of our experiences in designing, developing, and delivering the " Business Writing Remote Delivery Telecourse," which AEtna broadcasted in March and September of 1987. The overview will recap our approach to the following:

— analysis of the learning needs of AEtna employees across organizational levels in field office sites country-wide;

— selection of delivery methods, interactive learning activities, evaluative plans, and learner feedback mechanisms; and

— adaptation of content to the direct broadcast medium.

Also, we will provide the conceptual framework of the Effective Business Skills School, AEtna's response to illiteracy among lower-skilled, entry-level employees caused by changing job demands and demographic shifts. The school provides basic-skills development in five categories — reading, writing, mathematics, speaking, and computer literacy. Emphasis is on building self-confidence as well as comprehension, interpretation, and application to actual AEtna jobs.

The presentation is highly participative and will include a video demonstration of an interactive-learning activity that was delivered via direct broadcast satellite.

Presenter: Barry Mirkin
Strand: Evolving Technology
Title Using Interactive Videodisc Technology to Teach Basic Mathematics to Adults
Room: Sewickley, First Floor
Vendor Session

The Wisconsin Foundation for Vocational, Technical, and Adult Education, Inc. is involved in a project to develop a comprehensive, interactive videodisc system for teaching basic mathematics to adults. The courseware package will include the following items: placement test instrument, module pre/posttests, IBM-compatible software, 39 interactive videodisc lessons, and a supplementary print package.

This practical instructional system is geared to the remediation and improvement of basic math skills. The 39 interactive videodisc lessons provide explanations and the essential drill and practice required for complete mastery of basic operations involving whole numbers, fractions, decimals, percentages, and signed numbers.

Based on the results of an informal survey of colleges, technical institutes, vocational schools, and industrial-training departments, VTAE's interactive math system will feature the following: 24-hour availability; open entry/exit enrollment; competency-based, individualized, self-paced instruction; and computer-managed recordkeeping.

Included in this presentation is a demonstration of a pre/posttest, segments of an interactive video lesson, and the system's recordkeeping functions

Presenters: Brian Stecher & Ron Solorzano
Strand: Program Management
Title: Designing a Computer System for Monitoring and Reporting Adult Learners' Progress
Room: Parkview West, Club Floor

This presentation will describe the planning and design for a computerized database management system for storing, analyzing, and reporting the progress of adult learners in the California Literacy Campaign (CLC). The CLC is a volunteer literacy-tutoring program operated by local libraries throughout the state of California. The design of the computer system is closely related to the adult-learner assessment model that is used in the CLC tutoring program; the presentation will begin with a discussion of that model. Then we will describe the issues involved in a developing a computerized version of the system, ranging from clarifying the evaluation questions to identifying variable and developing reporting formats.

Friday Sessions (9:00 - 10:00 a.m.)

At the heart of the computerized system is a newly developed pencil and paper system for monitoring adult learner's progress on a statewide basis. Educational Testing Service (ETS) worked closely with the California State Library and the individual libraries participating in the California Literacy Campaign to develop this learner-focused assessment tool in 1987-88. The California Adult Learner Progress Evaluation Process (CALPEP) is a fresh approach to literacy assessment that doesn't rely on standardized tests or grade-level equivalencies. Instead, CALPEP monitors learners' progress in terms of actual reading and writing habits (what and how often do people read and write), accomplishments of personal literacy goals, progress through five CLC literacy levels, changes in the adult learners' self-assessment of reading and writing abilities, and changes in employment status.

While CALPEP has been well-received by local program coordinators, the data collection, tabulation, and reporting activities are very time-consuming. Knowing that this type of information can be compiled, tabulated, and managed well by computer, ETS began in the spring of 1988 to plan to computerize the CALPEP system. By studying the manner in which information was used at the local and state level and by understanding the kinds of questions that were asked, we were able to plan for the transfer of CALPEP to a computer in a useful way. Typical of the issues we had to consider were maintaining confidentiality, handling missing data, cross-referencing information to tutors and adult learners, training novice users, accommodating different computer hardware, matching screen formats to data collection forms, and transferring files to a central computer at the state level for aggregation.

When the computer system is operational, it will produce information to allow statewide comparisons of the performance of the CLC adult learners over time and local monitoring of the progress of individual learners. The important lesson to be learned is that it is feasible to develop effective technological solutions for assessment and management problems without requiring the use of standardized tests. However, such computerized solutions are not developed overnight. They must be carefully planned, and they must be based on a sound, client-centered model of assessment and a careful analysis of information needs.

Friday Sessions (11:00 a.m. - Noon)

Presenters:	**Janice Biros & Mike Giamo**
Strand:	**Software**
Title:	**Adult Literacy Software Development and *Hypercard***
Room:	**Norway, Club Floor**

One of the things that Drexel has been involved in as part of our literacy initiative and technical support function is the development of instructional software designed for adults reading at the 0-4 grade level. We've been using a brand new tool, *HyperCard*, for this development. This tool enables the integration of graphics, text, and digitized voice to create programs that are motivational, require no reading skills to begin working with, and are instructively sound.

Several goals governed our development of adult literacy software. One goal was to explore the *HyperCard* application to tap its true potential. Since it is brand new and quite revolutionary, working with it is still somewhat of a "frontier." The other goal, of course, was to produce some quality software that would not only be useful to literacy providers but would also increase the small supply that is available for the Macintosh. The third goal was to help literacy providers understand what the computer can and cannot do. By working closely with tutors and coordinators in the development process, we have been able to show them the potential that computer programs have — the voice, the motivational characteristics, the job-related skills (keyboarding, microcomputer concepts, word processing), and the limitations of the computer. Many providers had unrealistic expectations as to what a computer could be programmed to do as well as the resources necessary to accomplish some of those tasks.

Our development attempts have focused on comprehension, letter and word recognition and decoding, and vocabulary development. We have also created some that are language-experience approaches, a more holistic approach to teaching language-arts skills. By the time of the conference, we should have at least three programs to share with participants. One is an alphabet program for adults that introduces the student to the letters as they appear in the alphabet and provides them with words using each letter. Each letter is spoken as it is presented, and the sample words are spoken while their text is printed below a graphic representation of the word. Students can turn the speech on and off to practice pronunciation on their own. The program is like stand alone in that it requires no instruction on how to use the computer or the software — it is all provided orally and graphically by the program.

A second program that will be ready for presentation allows an instructor to employ the Cloze procedure. The program has five pieces of student writing included in it or the instructor can enter an original piece. Any part of a word or sentence may be blanked out so that a student can go back and replace it by using decoding and context clues. Comprehension questions are included that directly address stated facts, generalizations, and inferences, and are available for discussion and reactions. In addition, accompanying vocabulary-development instruction and exercises can be accessed. The information is arranged in a nonlinear way so that a student can use the material in whatever order he or she is most comfortable with.

The third program is a collection of vowel combinations and consonant blends that are presented textually and pronounced verbally. Exemplary words are presented for each item, and words may be removed from the screen or brought back at will. Students may choose the items they want to work on or they can do them all, in which case they will be generated randomly. In addition, the sound may be turned on and off so that students can practice pronouncing and sounding out the example words and then hear them to check themselves.

A presentation of this software would be interesting not only for what it contributes to the collection of Macintosh software for adult literacy students but for how an innovative application such as *HyperCard* with its graphics, voice, and HyperText capabilities can be used.

Presenter:	**John DeWitt**
Strand:	**Instruction**
Title:	**Reconnect Adults and High-Risk Students Using Computer-Managed Instruction**
Room:	**Parkview East, Club Floor**

The school district of Escambia County, Florida, has had significant improvements in test scores of potential dropouts since implementing computer-integrated systems. The results have shown an increase of over one month gain in students' reading and math performance for each hour they spend on a computer. Additionally, the role of the teacher has been significantly changed in that precise data on a student's learning performance is maintained, specific strands in deficit areas can be pinpointed for assistance, and the computer becomes an integral tool in the instructional process. The variety of courseware available has also made it accessible to a wide range of students from kindergarten to adult and from handicapped to gifted.

The school district of Escambia county has been concerned about the high rate of dropouts from its high schools. In a review of the research available, the following major characteristics of this population were noted: The dropout rate for the nation was approximately 27%; Florida, 36%; and Escambia county, 40%. Of all the reasons for dropping out, low functioning levels in basic reading, writing, math, and language arts contribute the most. Finally, economically disadvantaged youth are most likely to drop out — 76% of economically disadvantaged youth function at one or more grade levels below their actual school attainment level. Based on these factors, the district decided to implement a comprehensive computer-assisted instruction program focusing on the high-risk population of economically disadvantaged youth as the target population. The decision to use a specific CAI program was researched, and the specific issues in making the decision included the need for a system that could improve both academic and remedial programs through drill and practice, tutorial, and skill building and that would provide for individualized curriculum that could be used for kindergarten through adult and be controlled as to instructional sequence. District staff reviewed various hardware and software configurations and made their recommendation based on the following factors:

— Does the system meet the needs of various student populations?
— Is the system based on sound learning theory?
— Is there research to validate the program?

The Future

Based on the tremendous results with student gains, the future of CAI is promising. No number of computers will ever replace quality teaching and dedicated teachers; however, CAI will become a critical tool for successful teachers. The computer will be helpful in reorganizing their tasks so that much of their paperwork and record keeping can be assigned to the new technology, thereby allowing teachers to spend more time with students.

Presenters:	**Stuart Gedal & Joan Ford**
Strand:	**Instruction**
Title:	**Creating Job-Training Opportunities Through Computers**
Room:	**Fox Chapel, First Floor**

Policy makers, trainers, and adult educators are linking adult literacy and job training. Some, on the side of education, question whether the link should exist at all. Those who explore this territory find that microcomputers play important roles in effective training environments. How can they be used in literacy programs that enable adult learners to enter training?

World Education, an international literacy and economic development organization, became involved in Creating Training Opportunities through Computers (CTOC), a two-year effort funded at the Boston Technical Center by the Massachusetts Department of Education. The project used microcomputers to create a documentation system that adult learners and instructors shared.

To create curricula, we used a "conversion" process, developed as part of the ACE system in California, to debrief job-training instructors. We identified key skills in their curricula and activities in their classrooms. We analyzed the reading, writing, math, and listening skills learners used to carry out training tasks.

We knew that changing job tasks would mean revised curricula. At the same time, we set the goal of responding to individual needs of the adults we worked with. The ACE system lent itself to these demands because it organized reading, writing, and math "subskills" into a numerically-catalogued list. Think of it: a numerically-coded list of competencies for individualized curricula that required sorts and re-sorts of the list. This suggested using microcomputers.

We wanted to establish a "comfort level" for our learners, none of whom could afford computers. Comfort with computers would give an advantage to our learners in getting and keeping jobs. For some adults, computers provided incredible motivation to persist at learning activities. For others, becoming self-sufficient in operating a computer was important for sharing their children's experiences with computers at school. Computers became a key part of an environment in which adults with low basic skills felt competent enough to learn.

Two tools used to develop this sense of learning were a competency-based testing system and a set of individual learning contracts that reflected the competencies on these tests. Competencies were numbered on the entry assessments and each learner's contract, suggesting that we build a data base of the competencies used as entry standards for training programs.

With a word processing program and a printer, we could print out each contract individually or make the revisions in curricula job trainers would require. We wanted more adult educators to access these documents, so we developed the *Catalogue on Disk,* enabling any literacy-or job-training program with an Apple II, *Appleworks,* and *Sideways,* to use or alter our data base and documents.

Presenter: **Nancy Mullenax**
Strand: **Instruction**
Title: **Technology and the Arts: A promising approach to Instruction in Adult Literacy**
Room: **Carnegie II, Club Floor**

Recent literacy-and learning-theory research demonstrates that innovative instruction methodologies that make use of the adult learner's experience and creative potential are more successful. These methodologies and their underlying educational rationale (documented, for example, in the work of Malcolm Knowles, Cyril O. Hole, Paulo Freire, Hunter & Harman, and Jonothan Kozol) take into account the relation between the learner's creative participation in the learning process and the development of critical-thinking and linguistic skills. Incorporating the learner's experience and perception into the curriculum increases its relevance, and as a result, its effectiveness.

Two of these methods that have been used in the United States, Canada, and Latin America consist of using the learner's thoughts, however produced or expressed, as the basis for the reading curriculum, and using the arts, particularly the visual arts, in the process of teaching critical-thinking, reading, and writing skills. Learners' interest and motivation increases as a result of participation and self-direction. While more interesting for the learner, a curriculum based on his or her goals and creative expression is also more relevant: it provides learners with the opportunity to reflect on their own lives and develop lifelong-learning, critical-thinking, and decision-making skills.

Technology can facilitate and integrate the components that underlie adult learning and literacy methods because it is capable of simplifying the processes through which learners may independently and actively express themselves. At the same time, technology opens up more avenues through which learners may develop communication skills in four language modes — listening, speaking, reading, and writing — in nonthreatening, self-paced learning environments. Writing, for instance, when done on a computer with educational word processing software, becomes less threatening. Mistakes can be easily edited and changes readily made. In using a keyboard, learners are able to concentrate on their thoughts, rather than on the appearance of their handwriting. Illustrations and computer graphics can be easily created and incorporated in the word processing text, thus providing students with the opportunity to write and illustrate their own stories, resumes, letters, and poetry.

The arts, whether drama, sculpture, or video production, help learners move from the concrete to the abstract, from looking and doing to thinking about and conceptualizing. Communication skills are used in a holistic way and within a context: the learner uses and applies a variety of linguistic skills at once; the learning process involves visual, tactile, and kinesthetic modalities; and, as learners' self-experience is respected, their learning experience is successful. Technology and the arts are media that pique interest and nurture self-direction, self-motivation, and language acquisition, while not "robbing imagination of its rightful place and declaring war on dreams." Used together, they provide an empowering learner-centered, adult-literacy methodology that promotes our human imaginations, respects our experiences, and affirms our self-expression.

In this presentation, I will first provide an overview of those instructional components and learning theories, such as the language-experience approach and the use of the visual arts, which I have proven to be effective in adult literacy instruction. I will then describe several literacy projects that are currently using the arts and/or technology to implement different learning theories. Finally, I will describe and demonstrate specific ways in which different technologies can be used in conjunction with the arts, to facilitate learner participation, experiential learning, and the development of communication skills, while providing a high motivational and interest level for the adult learner and fostering cooperation, caring, and mutual respect within the learning environment.

Presenters: **Regina Peruggi & Leslee Oppenheim**
Strand: **Staff Development**
Title: **Teacher to Teacher: A Video Series Demonstrating Effective Teaching Practices in Adult Literacy**
Room: **England, Club Floor**

Recently, increased public awareness of the problem of adult illiteracy in the United States has resulted in large numbers of adults seeking instructional service in basic education and English as a second language. One response of our federal government to the long waiting lists has been to encourage volunteerism. Such slogans as "All you need is a degree of caring" belie the fact that there is a critical need for well-trained professionals to deliver literacy instruction. Having experienced years of frustration and failure in school, the adult literacy student now requires the special attention and skills of a highly competent, adult literacy instructor. Finding ways to develop the teaching skills of literacy instructors is an important consideration.

Friday Sessions (11:00 a.m. - Noon)

Because of the influx of adult learners, large numbers of teachers have been placed in classrooms with little or no formal training. In addition, most adult literacy programs are staffed by part-time instructors, often teaching by themselves in a single-class site. Since many teachers often work at several part-time teaching jobs, the opportunities for staff development, observation of other teachers, and instructional support are minimal. Recognizing the need for adult literacy instructors to have an understanding of how adults become literate and how best to foster adult learning, the Office of Academic Affairs of the City University of New York has developed a twelve part series of teacher- training videotapes for adult basic education and English as a second language. The series is based on the premise that less effective teachers have a great deal to learn from watching expert teachers. The tapes are professionally produced documentations of actual classroom situations taught by teachers who have been identified as experts. As the demonstration proceeds, teaching philosophies, approaches, and methodologies are amplified through the use of voice-over and graphics.

The proposed session will discuss the principal instructional assumptions underlying the teaching that is presented. Portions of tapes will be shown to demonstrate each of the assumptions.

Presenter: Deborah Young
Strand: Software
Title: Integrating Software into Today's Lesson
Room: Parkview West, Club Floor

In today's society, people must not only read and write, but many will be expected to use computers in their reading and writing as well. Many adult learners have a fear of technology. Rather than focus on the intricacies of the computer, learners must become familiar with computers through meaningful reading and writing tasks. Thoughtful selection and dynamic use of available software will increase adults' confidence with technology and, at the same time, contribute to reading and writing growth.

Techniques and strategies for involving learners in computer tasks will be discussed. Specific computer activities that enhance learners' knowledge and reading and writing strategies will be illustrated with slides.

Friday Sessions (1:30 - 2:30 p.m.)

Presenter: Charles Blaschke
Strand: Research
Title: The Use of Computer-Based Education in the JTPA System
Room: Parkview West, Club Floor

The use of computer- and related-technology-based instruction in the JTPA system has increased dramatically over the last two years. In 1987-88, Education TURNKEY Systems conducted a study of current and projected use in the JTPA System, with a focus on in-school youth, summer youth-training and education programs, dislocated workers, and the Job Corps. Conducted for the National Commission on Employment Policy, the study also identified and described eight exemplary sites that are using technology.

Friday Sessions (1:30 - 2:30 p.m.)

The major findings from this study are as follows:

— microcomputer and related technology use has increased considerably since Congress mandated, in 1986, assessment and remediation services for youth participants in Title II(A) and II(B) programs.

— More so than in public schools, integrated delivery systems in local area network configurations are used to deliver remediation, basic education, and pre-employment skill development for both youth and adults.

— Most computer-managed instruction configurations are individualized, self-paced, student-directed, and open entry/exit.

— The most prevalent integrated delivery systems are Computer Curriculum Corporation, IBM, Control Data Corporation, Ideal Learning, and Prescription Learning Corporation.

— Interactive videodisc systems, such as IBM's *InfoWindow* are increasingly being used with adults, particularly those with limited English proficiency, with some success.

— Interactive distance-learning programs are limited to specific states, such as New York.

In spite of the increased use, there exist a number of barriers to expanded use in the JTPA system: inadequate funding levels on a participant basis to justify significant investments in hardware, state interpretations and regulations affecting hardware and software purchases, inadequate information about the potential of technology use in the system, and market fragmentation.

These and other findings will be presented in detail. Findings from a recent TURNKEY market research study of the potential use of technology in the adult basic-education market will also be presented.

Presenters: **Dot Bonds & Wilda Chadick**
Strand: **Parent and Intergenerational Literacy**
Title: **Project WILL**
Room: **England, Club Floor**

Although the Literacy Council of Jefferson County (Arkansas) has offered reading classes since 1982, only 10% of the 134 adult students enrolled in 1985 were women. But according to the 1980 census, one out of every four women in Jefferson County is functionally or marginally illiterate, and almost half are mothers receiving public support. Concern for the low number of women in our program led to the discovery that nonreading women are hampered by a lack of child care, transportation, and motivation. Homebound by small children and anesthetized by poverty, boredom, and soap operas, women don't have the same incentive or mobility required to take advantage of most reading programs.

Project WILL (Women in Laubach Literacy) was designed to meet the specific needs of illiterate women, particularly mothers with young children. Two mornings each week these women are provided with child care, door-to-door transportation, free one-on-one reading lessons, and group sessions that teach survival skills. An Individualized Education Plan (IEP) is developed for each woman, and she is urged to set goals for herself.

The beauty of Project WILL is that it involves so many different community groups. It is a collaborativie effort that includes interagency cooperation, community support, child care, transportation, and group activities planned with the help of the participants. For example:

— The University of Arkansas at Pine Bluff (UAPB) provides classroom space, and UAPB's Work Study program, along with faculty and staff, provide many of our tutors.

— Referrals come from social service agencies, the women's shelter, the court system, the Employment Security Division, and by simple word-of-mouth.

— Community service groups provide guest speakers, volunteer tutors, technical assistance, and much needed supplementary funding for brochures and special projects.

— A nearby church offered facilities for the Little People Workshop, our enriched child care program, and transportation was contracted through the city transit system for door-to-door service.

Project WILL's goal is to tutor 40 women by September; we are currently serving 37. We have a waiting list of women who are ready to read, but we don't have tutors for them. Each day, the number of interested students increases; unfortunely, the tutor-to-student ratio is not. This has made it necessary for us to look at other teaching methods to supplement the Laubach method now in use. We are researching new technology for teaching tools that can be used for adults reading at the fifth grade level and below. We have already made some progress using video tapes and the VCR as a substitute tutor and for supplementary reading instruction. Our students have enjoyed seeing themselves on television with the help of our RCA Camcorder. We are recording the student and tutor sessions during an early lesson from Book One and then a later lesson. They are impressed with their progress, which certainly raises their self-esteem and stimulates motivation. We are also using Robert Westrom's *Learning to Read Words* and the TV Tutor available from New Reader's Press.

Our future plans include the use of video-programmed lessons to enhance social skills that are sadly lacking in illiterate women. Videos can also teach social skills, social studies, art, music, history, etc.; these skills are vital to a person learning to be self-sufficient. We are currently using video training for tutors as well. Video technology will increase oral skills of our women as they learn correct sentence structure, grammar, and how to speak properly. We are even using our students to recruit by taping them for PSAs. This further adds to their self-esteem and introduces them to potential career ideas.

Lack of funding has kept us from using computers and some of the newest reading programs already available. However, we now have some funding designated for this purpose. A student newsletter is planned using desktop publishing, which enables them to take what they are thinking and put it into words. This newsletter will be written by the students using word processors. Word processors will raise morale and facilitate writing skills as well as start them on a job-training program using the skills they've learned. A computer program showing jobs and their qualifications will help them to realistically set career goals. Computers also aid in diagnostic processing, provide individualized instruction, and include high-quality expertise.

Other technology planned for Project WILL includes the hand-held Spelling Computer, the "Tok Back" for auditory feedback, tape recorders for taped lessons for repetition and auditory feedback, self-correcting typewriters for kinesthetic-tactual imprinting, talking books for the blind so that they can read along and enhance duet reading, high-speed tape recorders used for the blind and slowed down to about one third so that they can hear and have time to internalize, and hand-held calculators.

We are also using technology to provide individualized assistance for our learning-disabled students. We are discovering that almost all of our women have one or more learning disabilities that hinder the learning process. Talking computers allow LDs to put information in and get it read back to them. Microcomputers will serve as an extension and expansion of memory and for language acquisition.

Sheer numbers have required us to use every means available to teach illiterate adults. Our recent program growth requires huge numbers of volunteer man hours, and we are reaching our limit of untapped sources. We must look to technology to close the gaps between the volunteers needed for the Laubach method and the hundreds of new readers asking for our help. It is our hope that the 1988 Adult Literacy and Technology Conference will assist us in our endeavors.

Presenter: Linda Eversole
Strand: Software
Title: Discover Intensive Phonics: Making a Difference with Literacy
Room: Fox Chapel, First Floor
Vendor Session

"Discover Intensive Phonics for Yourself" addresses the need for instruction in the foundations of reading (phonics-decoding) through a multisensory methodology that encompasses the visual, auditory, kinesthetic, and tactile modalities. It incorporates spelling and decoding proficiency, thereby producing a sound foundation for the development of efficient reading skills. The program emphasizes an organized, orderly, sequential, step-by-step approach to the teaching of phonics skills. It is a very essential remedial support program for students in high school and beyond who lack a basic foundation in reading. The procedure is particularly beneficial in teaching immigrants how to read our language. Mastery is based on learning 42 sounds of the alphabet, 5 phonetic skills, and two decoding skills.

A multisensory, computer courseware package that utilizes the human voice is now available for Intensive Phonics in an adult version. Recognizing the fact that the nonreader is unable to read materials on the screen, HEC software has developed an ACIB (Audio Cassette Interface Board) that synchronizes the screen display with a tape recorder, providing excellent voice instruction for each lesson. Illustrated start-up procedures make it appropriate for a library setting or any independent-learning situation. The learning opportunities are amplified by the student's ability to see, hear, and tactually interact with the computer. Additional drills and practices, are provided through a set of practice cards and cassettes that accompany each lesson. The courseware is available on IBM and will soon be available on the Apple IIe and Apple GS. Future plans include the development of Intensive Phonics on videodisc, but the present application provides an excellent computer course utilizing the hardware that institutions already have and need to be using.

Friday Sessions (1:30 - 2:30 p.m.)

Presenter: **M. Tara Joyce**
Strand: **Research**
Title: **Visual Movement in Televised Blending for Adult Beginning Readers**
Room: **Parkview East, Club Floor**

Research on adult literacy indicates that there is a need for information about the reading processes of adults at a beginning level and the techniques that address these processes. This presentation will report the results of a thesis study investigating the use of television production techniques to teach blending and word recognition to adults who are beginning readers (reading below a second grade level). Televised instruction helps to minimize some of the barriers to traditional instructional programs, and it has the capability to demonstrate abstract processes in an interesting manner.

Sixty-six subjects reading below a second grade level were pretested and randomly assigned to one of two treatment groups (visual movement or still frame) or an untreated control group. Treatment subjects watched a twenty-minute videotape once a week for four weeks and posttested after the fourth session. Control group subjects were pretested and posttested only.

The visual movement group saw an unedited version of silhouette blends (taken from "The Electric Company" television show) in which letters move to form words as actors are shown pronouncing the words in parts and then as a whole. The still frame group saw an edited version in which the audio is the same, but the video for each word has been still-framed at the point where the letters have already been moved together. Thus, there is no letter movement.

Due to the visual cue of movement with simultaneous audio and the concrete representation of blending in the visual movement condition, it was hypothesized the the visual movement group would improve significantly more that the still frame and control groups on the three tests administered and that the still frame group would improve significantly more than the control group.

A survey of video cassette recorder usage and instructional videotape interest was also taken with all subjects. Results of this survey will be presented, along with the other results.

Presenter: **Lucy MacDonald**
Strand: **Evolving Technology**
Title: **A Sound Approach to Literacy**
Room: **Norway, Club Floor**

I will explain the uses of new sound technology in the delivery of literacy lessons. This demonstration will include the uses of a talking word processor for both literacy and ESL (English as a second language) students. We will also present a "talking" spelling program and discuss its success rate with learners. Finally, a digitized sound program called MacRecorder will be shown with prototype lessons, which will demonstrate the uses of this new technology.

Friday Sessions (1:30 - 2:30 p.m.)

Presenters: **Ray Manak, Barbara Simpson & Robert Visdos**
Strand: **Instruction**
Title: **Cuyahoga Community College's Adult Learning Center: A Partnership in Literacy and Economic Development.**
Room: **Oakmont, First Floor**

Cuyahoga Community College is the largest college in the Greater Cleveland area. The college recognizes its responsibility is to provide access to higher education in an urban community. The College's Adult Learning Center provides literacy training and educational access. This center is a key component in the College's Urban Demonstration Model, which is designed to improved academic preparedness of public school students.

In 1986, Cuyahoga Community College responded to the citywide effort by local business, political, civic, labor, educational, and religious leaders called "Commitment to Literacy" and established the Adult Learning Center. The center is as dynamic partnership between the college, the city of Cleveland, the Cleveland Public School's office of Adult Continuing Education and the Greater Cleveland Literacy Coalition. A substantial portion of the center's program operations is funded by the city of Cleveland. Program faculty are hired jointly by the college and the Cleveland public schools. Volunteer tutors are provided by the Literacy Coalition.

The Adult Learning Center is a vital program in the college's Division of Training and Economic Development. Now one of the largest adult literacy programs in Ohio, the center teaches everything from basic reading and mathematics to the high school subjects needed to earn a GED and job search skills.

The center provides a strong multi-instructional environment that includes Control Data Corporation's Local *PLATO* Delivery System (LPDS) and *PLATO* courseware. Participants in the program average approximately six to ten hours per week in the *PLATO* lab. A sample group of students enrolled in the center's basic-skills program, some of whom entered reading at only a fourth grade level, gained an average of 1.9 grades in reading in 10 weeks and 2.3 grades in math in just 7 1/2 weeks. The college has a long, success rate utilizing the *PLATO* courseware in developmental and remedial programs and considers the *PLATO Basic Skills* and *PLATO High School* skills to be efficacious instructional strategies. Based on these successes with *PLATO* and further recommendations by national literacy experts, the *PLATO Basic Skills* and *PLATO High School Skills* courseware were determined to be the core computer curricula for the center.

During this year, the center will serve 1000 JTPA participants. The center is open six days per week and provides evening and weekend hours. Intake occurs every Monday. Participants are assessed prior to intake and then placed in either the Basic-Skills track (grades 4-8) or in the GED preparation component (grades 9-12). An individual instructional plan is designed for each student.

Current Adult Learning Center programming also includes providing *PLATO* support to the Cleveland Alternative Education Program (CAEP), which assists high-risk youth and the College Project EQ, which assists high school students in preparation for college.

Control Data's new Local *PLATO* Delivery System (LPDS) and the older CDC 110 technology have enabled the center to expand its literacy services to the state's new pre-release center, located directly across from the college's metropolitan campus, and the state's facility for females, located several miles away. In addition, the Adult Learning Center will provide

PLATO based remedial courses for various occupational-training courses in the college. In partnership with St. Vincent Quadrangle Inc., which is a local development group, a *PLATO*-based learning center will be built in one of Cleveland's largest public housing complexes. In addition to these initiative, the Adult Learning Center is working in partnership with a variety of companies in the Greater Cleveland area to establish *PLATO*-based workplace literacy centers in their plants.

The college's Adult Learning Center is a significant partnership builder in the Greater Cleveland area to effectively fight illiteracy and enhance economic development. The center is on the cutting edge of literacy training and education reform.

Presenters: Tim Songer & Cindy Johnston
Strand: Software
Title: The READY Course: Interactive Computer Instruction with Digitized Audio
Room: Carnegie II, Club Floor

In 1983, Central Piedmont Community College of Charlotte, North Carolina, began a unique literacy program to teach basic literacy skills to adults. This program, called Adult Basic Literacy Education (ABLE), was one of the first to apply the use of computers and technology to the teaching of adult literacy students.

The popularity of the ABLE program with adults has continued to increase as a result of its technology-oriented method of instruction. The program has expanded to seven locations within its service area, and it has been replicated by six community colleges in North Carolina and other locations throughout the nation.

The college continues to research and develop new and innovative methods for teaching basic literacy skills to adults. In 1985, CPCC won a FIFSE grant (Fund for the Improvement of Post-Secondary Education) from the U.S. Department of Education. This three year project is designed to produce a core curriculum of microcomputer courseware to help adults functioning between the fourth- and eighth-grade reading levels learn more effectively.

During the first eighteen months of the project, twenty reading modules were scripted and programmed. In addition, the READY course, a new approach to the development of reading comprehension skills in adults, was developed. Addressing eight essential reading proficiencies, the courseware gives the student the amount of time and level of practice necessary to improve. Digitized audio capabilities of the courseware enable students to hear directions that precede every exercise, pronunciation, and definition of the difficult words. The digitized audio capabilities will be demonstrated during the presentation.

Saturday Symposia

Panel: **Interactive Video for Teaching Adult Literacy: A Developmental Session**
Time: **Saturday, 9:00 - 10:30 a.m.**
Panelists: **John Tibbets, John Fleischman & Sheila Shaw**
Room: **England, Club Floor**

Most conference sessions involve process or product demonstrations of successful developments or commercial products. This conference brings together some of the best minds and widest experiences in using technology to promote adult literacy in the United States. It would seem appropriate, therefore, that these minds and experiences could be pooled into a "think tank" to create innovative programs for promoting adult literacy.

While interactive video appears to offer some of the most exciting possibilities in this area but has been largely ineffectively developed or prohibitively expensive, this session is designed to use the participants' own expertise to generate possible interactive-video program ideas that would be educationally sound and cost effective.

The format of the program would take several possible threads or ideas and use three approaches: a case study approach, a brainstorming approach, and a problem- solving approach. The case study group might review an ineffective and expensive interactive video program and redesign the program to make it effective and affordable. The brainstorming group might take a single idea such as the use of film (accessible silent movies or classic movie footage) to create a literacy program that might involve reading, writing, and critical thinking. Finally, the problem-solving group could work from a specific educational problem, such as literacy for beginning-level readers, and would generate possible interactive video ideas for this population.

Participants would select a small, group area of interest and be responsible for bringing back to the whole session their ideas and suggestions for developing and marketing interactive videos. The group as a whole would, in turn, modify, elaborate, and make recommendations for each small group's proposal.

At the end of the session, each participant will have accomplished the following objectives:

— They will have been actively involved in generating new ideas for feasible interactive video products.

— They will have gained an in-depth understanding from other participants about the possibilities and pitfalls of interactive video as an instructional tool.

— They will have come away with specific, interactive-video programming possibilities reflecting ideas from some of the most knowledgeable and creative technology developers and users in the the United States today.

Saturday Symposia

Panel: **Are Major Computer Systems Effective in Teaching the Basic Skills?**
Time: **9:00 - 10:30 a.m**
Room: **Canada, Club Floor**
Moderators: **Benita Sommerfield, U.S. Department of Education**
Terilyn Turner, Technology for Literacy Center

Panelists:
John DeWitt, Escambia County Schools
Bella Hanson, Technology for Literacy Center
Cindy Johnson, ABLE

Practitioners discuss their experience with *PALS, CCP*, and *PLATO.*

Panel: **International literacy programs**
Time: **Saturday, 9:00 - 11:00 a.m.**
Room: **Parlors B/C, 17th Floor**

Panelists:
Judy Brace, Academy for Education Development
David Barbee, Center for Advanced Learning Systems, U.S. Department of Labor
Members of USIA WorldNet

The focus of this panel will be on literacy programs in Latin America. This session will demonstrate video and audio tapes from different programs to be followed by telephone conferences with directors from these programs. Translation from Spanish to English and English to Spanish will be provided.

Saturday Sessions (9:00 - 10:00 a.m.)

Presenter: **Karen Backlund**
Strand: **Parent & Intergenerational Literacy**
Title: **Using Technology to Impart Survival Skills to Parents**
Room: **Carnegie II, Club Floor**

The title of this paper is a bit of a play on words since the site I am reporting on is titled the "Survival Skills Institute, Inc." Survival Skills Institute (S.S.I.) is a nonprofit, community-based, social service agency. Its mission is to provide nontraditional educational and mental health services to an underserved, predominantly minority population of clients who reside in Hennepin County (Minneapolis, MN). Barrier-free participation (licensed child care and transportation are provided) is provided in a nonthreatening environment with the major goal of the agency being to increase self-sufficiency of the clients.

Technology has dramatically influenced the ACTION program. This program has a history of reaching an extremely high-risk population of adult learners. Many clients are referred through the court system, from other mental health providers, and from educators who are aware that these clients would not succeed in the traditional, adult basic-education system.

Our current target population are parents (18 to 35 years old) in need of a comprehensive program of services, include which basic skills development and/or a GED preparation, job readiness training, independent-living skills, parenting and child development training, counseling, and outreach.

How has the integration of technology into the ACTION program enhanced our ability to serve these parents and their ability to care for their children? Since we are just beginning to integrate technology into our program, hard data to answer these questions has yet to be collected (although by this summer I will have collected some data for a grant evaluation report). However, technology already has enhanced our service delivery in five key areas:

1. Both the number of clients served and number of hours in attendance have increased compared to the same time period last year. Further increases are projected. While this is not entirely attributable to the addition of technology, clients cite this as a significant drawing card. The rate in which clients improve grade level score and pass GED tests has increased; attainment of client-determined goals has also increased.
2. Client learning has become more private, independent, and self-paced through the use of technology. Technology is also nonjudgmental and provides immediate feedback. This, coupled with successful completion of their goals, has improved the clients' self-esteem.
3. Because of technology we have more time to respond to clients' needs and goals. With the wealth of software available we have been able to, and will continue to, purchases materials that teach appropriate educational, practical, survival, independent-living, and parenting skills.
4. Clients' self-confidence is strengthened because they are challenged to make choices and exercise control when using computers.
5. Improvement in clients' parenting and education skills has broadened their ability to relate and care for their children. Their new-found knowledge benefits their children.

Presenters: **Mary Hogan, Carol Goertzel & Donna Pratt**
Strand: **Staff Development**
Title: **Staff Development and Instruction**
Room : **Norway, Club Floor**

The Women's Program of the Lutheran Settlement House is a community-based, multifaceted, social service agency that provides education, counseling, and employment services to primarily low-income women in the Kensington/Fishtown section of Philadelphia. Kensington/Fishtown is a section of the city that suffers from high unemployment, the highest high school dropout rate in the city, high levels of substance abuse, large numbers of single-parent homes, and a high rate of poverty.

In 1976, the Women's Program surveyed the community to ascertain the needs of women and then designed programs to meet those needs. Although the programs are focused on the needs of women, people throughout Philadelphia participate in activities at the Women's Program. Currently, these programs include the following: clerical/computer literacy training; computer-aided, drafting training for women; job search; a displaced homemaker program; a Private Industry Council referral system; educational and vocational counseling program for women in shelters; a Teen-At-Risk Project and Teen Parent Project; a 24-hour, bilingual, domestic-violence project (in English and Spanish); a safe space for battered Latinas; literacy, ESL, and adult basic education; high school equivalency classes and tutoring; tutor training; curriculum development; personal counseling and workshops; free drop-in childcare, and a Title XX daycare center.

The Education Project at the Women's Program is unique because it is a classroom-based, learner-centered model that is derived from the theories of Paolo Freir, a Brazilian educator who related education to the political and social concerns of the Brazilian peasants by discussing their concerns and by relating what they were learning to those concerns. The Women's Program has attempted, throughout the years, to relate adult literacy and education to the concerns, issues, and dilemmas faced by the students. This focus is evident in the curriculum developed at the Women's Program, which deals with family violence, parenting, unemployment, working within this community, discrimination, prejudice, oral traditions, and the changing roles of women within the community. The Women's Program also works on the demystification of education by hiring community residents as staff and teachers who have obtained their GED within the program. These teachers and staff provide input and ideas and relate more directly to the concerns of the students as adults within the larger community.

Our presentation will discuss how the Women's Program trained its staff and teachers and how the program incorporated IBM software and computers in the classrooms and tutoring situations, while maintaining its learner- and women-centered focus and its emphasis on demystifying education. We will also explain how computers became a source of empowerment for students, staff, and teachers and how to train staff, teachers, tutors, and students to use computers as both a source of instruction and as a sourse of motivation. Finally, we will show how to incorporate computers and software into existing programs while maintaining the agency's traditional focus and concerns and how to critically evaluate software.

The presenters will discuss the creative utilization of computers with low-income students who have special needs: specifically, students who live in shelters, or are teen parents or displaced homemakers, or are students preparing for training programs.

Participants in our workshop will have the opportunity to discuss their agency models and how to incorporate computers into that model, be it tutor- or classroom-centered. They will be able to discuss various methods of training staff, teachers, tutors, and students on how and when to use computers. They will view selected IBM software and discuss how to critically analyze the software for ethnic, class, and sexual biases. They will also learn how to utilize the software, so that students develop critical-analysis skills and can work with computers as a source of empowerment as well as a drill and practice tool.

Presenters: **Ruth Hollenbeck & Evelyn Jorgenson**
Strand: **Program Management**
Title: **The Use of Computer Technology in Missouri's ABE/JTPA Programs**
Room: **Oakmont, First Floor**

The Missouri ABE and JTPA programs use the new Test of Adult Basic Education (TABE) in a very special way by utilizing the Project Basic III management system and Apple IIe computers.

Students mark their answers onto computer cards, the cards are scored by the computer and cardreader, and a printout is received. The printout not only shows the correct and incorrect items, but also gives specific remediation suggestions. Prescriptions are matched to TABE objectives and include suggestions for instructional software and popular adult basic-eduction texts.

Saturday Sessions (9:00 - 10:00 a.m.)

TABE form 5 tests are used as diagnostic tests, and TABE form 6 tests are used as posttests. Students may be tested on level E (easy), level M (medium), level D (difficult), or level A (advanced). Test results become part of each student's files, and the files are updated automatically as a student masters additional objectives. Tracking student progress and updating student records is continuous and easy. Achievement, grouping, and status reports are also easily obtained. The presentation will include time for hands-on practice with the materials.

Presenters:	**Linda Stacy & Linnae Juliano**
Strand:	**Instruction**
Title:	**ABE/GED Industrial Programs: An Instructor's Point of View**
Room :	**Churchill, First Floor**

Note: Our assumption is that many people attending the session are interested in starting in-plant, basic-skills programs or have done so and have not been successful; therefore, out goal is to offer direction and troubleshooting techniques to those individuals.

I. Introduction
  A. The history of industrial education
  B. The current need
  C. Cost of illiteracy to industry
  D. Money spent on training
II. Our Background and Experience
  A. Linda — developed and implemented a basic-skills program for Maumee Stamping Plant (Ford Motors) in September, 1985.
    1. Initial employee reaction
    2. GED participants
  B. Linnae — took over as instructor when Linda left in November, 1986.
    1. New directions
III. Positive Program Points
  A. Accessibility for employees
  B. Benefits to employer
  C. Benefits to employee
IV. Problems/Troubleshooting
  A. Recruiting
  B. Overtime/production
  C. Impact of the instructor — his or her role in the plant.
  D. Program changes/meeting new needs
V. Identification of company needs
  A. Selling and employer of needs
  B. Class times and location
  C. Promotion
  D. Plant liaison
VI. Questions and Answers

Saturday Sessions (9:00 - 10:00 a.m.)

Presenter: **Louise Tomlinson**
Strand: **Instruction**
Title: **Vocabulary Development: A Model for Computer-Assisted Instruction on Suffixes and Prefixes**
Room: **Fox Chapel, First Floor**

This lesson series has been designed to help students increase their understanding of the use of prefixes and suffixes in combination with other words or word parts, in order to enhance vocabulary development. The series presents the lesson content in a logical, sequential, and comprehensive manner. The presentation is conversational in tone and deductive in style. The objective of the series is to strengthen the advanced or mature reader's word knowledge toward increased skill in independent word recognition through structural analysis.

The lesson's approach incorporates the following components:

— the introduction of functional definitions (e.g., definitions of the affixes and their use),
— example words for target affixes in contextual sentences,
— multiple-choice probes for definition of the target word based on context clues in the example sentence,
— affix and base word analysis incorporating Latin derivatives where applicable,
— repetition of the steps above using the target affix with additional base words,
— continuous reinforcement following each trial step (e.g., positive reinforcement leading to the next lesson component or negative reinforcement, which provides a definitive statement of clarification),
— exercises on recognition of the target affix and various base word combinations among a list including foils, and
— a final comprehension check utilizing a "cloze" passage from a nonsense fictional story requiring appropriate placement of several words including target affixes.

Our presentation will also discuss the need for prefix and suffix instruction to enhance the more advanced reader's ability to perform independent structural analysis of vocabulary above and beyond the sight-word level. The lesson components will be described in lecture format. Finally, the steps of a sample lesson will be illustrated either by overhead transparency frames or by computer interaction.

The importance of our presentation is that it informs the audience of a comprehensive model for vocabulary development through computer-assisted instruction on affixes and base words. The presentation is particularly valuable to individuals interested in developmental or postsecondary instruction, but it is also relevant to instruction for grade levels 5-8. The series has been used for supplemental vocabulary instruction with college freshmen in a developmental-studies, reading lab program. The program is Apple IIe compatible.

Saturday Sessions (9:00 - 10:00 a.m.)

Presenters: **William Vilberg & Ron Blackwell**
Strand: **Emerging Technology**
Title: **The Emergence of *HyperCard*: Technology for the 90s?**
Room: **Australia, Club Floor**

While computers are truly remarkable machines, they require the support of authoring systems before their capabilities can be effectively used in education. One of the newest of such systems is *HyperCard* , for the Macintosh personal computer. *HyperCard* allows the creation of educational packages that are user-friendly and take advantage of the Macintosh features, such as high-resolution graphics and the mouse. With the Hypertalk programming language (an integral part of *HyperCard)* complex programs can be created.

HyperCard is being presented as an "information environment" that will form the foundation of everything done on a computer. Claims are being made that anyone can learn to use it, modify it, and create new applications with it. As technological leaders, it is imperative that you are familiar with both the potential and the pitfalls of this emerging technology so that you will be able to fully take advantage of it.

HyperCard is based on the graphic interface of the Macintosh- windows, buttons, menus, icons, and scroll bars. But it goes beyond what has been done before by supporting the linking of information in a nonlinear manner. Any "card" of information can be linked to any other card with the addition of a "button" that, when clicked, moves the user between the two. Similarly, buttons can be added that involve operations, allowing nontechnical users to perform technically complex tasks. *HyperCard* is more than a program that is run on the Macintosh, it is a new set of potentials: its real value lies in the creation and availability of new applications and information structures that it makes possible.

But these new creations won't appear by magic. In addition to a system designer, programmer, and a subject specialist, the development of an effective *HyperCard* application may require the inclusion of a graphic artist as well as a knowledgeable engineer to deal with the graphic interface and the linking of information, respectively. The traditional method of completely specifying the system prior to the start of implementation may be replaced by a prototyping environment where a "first approximation" can be created quickly, tested, and modified repeatedly to generate the final application.

HyperCard was not created to support educational activities, as was the case with other authoring systems and even some computer languages. *HyperCard* is meant to liberate the flow of information and to serve as an information navigator. In a world that is becoming increasingly rich in information sources, the effective use of these sources will become one of the major goals of education. By supporting traditional educational environments and be extending the educational activity to new locations, *HyperCard* has the potential of being one of the most widely used educational support systems in existence.

At the presentation, we will discuss some of the problems we have encountered in the process of authoring several educational applications in *HyperCard* as well as successful strategies in overcoming these problems. Copies of our adult educational software will be available for duplication. Also, a list of publicly available *HyperCard* applications and an annotated bibliography of *HyperCard* publications will be distributed.

Saturday Sessions (10:30 - 11:30 a.m.)

Presenters: **Rita Bean, Chris Giver & Rhonda Johnson**
Strand: **Research**
Title: **An Evaluation of the Implementation of Microcomputers in an Adult Literacy Program**
Room: **Parlors E/F, 17th Floor**

The use of microcomputers with Adult Basic Education (ABE) students has been hailed for having a number of potential instructional benefits. Well-designed, age-appropriate, computer-assisted instruction (CAI) could provide immediate multimodal feedback, permit learner-selected lessons, and provide nonjudgmental instruction in a highly motivational format (Rachal, 1984). CAI could enable adult students to learn in a highly individualized, interactive environment that also affords them privacy.

While a number of articles have described the benefits and drawbacks of using computer-assisted instruction with ABE students, empirical evidence supporting the instructional efficacy of using microcomputer-based CAI with this population of learners is lacking. In conducting a review of empirical literature on the use of computers in adult literacy programs, Rachal (1984) found only twelve empirical investigations in the ERIC database. The majority consisted of efficacy studies concerning the use of CAI on mainframe systems with various populations of ABE students. The CAI used consisted of practice and drill modules for the remediation of various skill deficits and for preparing students to take their general equivalency diploma test. There were no consistent results from these studies demonstrating the effectiveness of CAI with adult literacy students. Even if some significant, consistent results had been obtained, they would be irrelevant because the software and microcomputer environments presently in use have changed. What can be learned from this earlier mainframe CAI research is that there is a need to develop more precise and sophisticated research methodologies to investigate the instructional efficacy of microcomputer applications with ABE students.

As more and more ABE programs obtain access to microcomputers, it is imperative that an empirical knowledge-base is developed regarding the instructional efficacy of different types of software and how to effectively integrate educationally sound CAI into an already full ABE curriculum.

The Pitt Adult Competency Program (PAC), based at the University of Pittsburgh, was given access to a microcomputer laboratory of Apple IIe's. It was decided the the implementation of microcomputer applications into the PAC curriculum should proceed in an inquiry-based evaluative manner. The PAC research staff decided that the decision-oriented educational research model (DOER) of evaluation research (Cooley and Bickel, 1986) would be an appropriate framework in which to document and evaluate the on-going implementation of microcomputer application in the PAC curriculum. This paper presents a case study of how DOER was used to evaluate the implementation of microcomputer applications into an adult literacy program.

The case study will be presented in lecture format, with a description of the research design, a report of results, and a discussion of implications for adult literacy practitioners.

Saturday Sessions (10:30 - 11:30 a.m.)

Presenters: **Emory Brown & Eunice N. Askov**
Strand: **Research**
Title: **Attitudes of Teachers and Learners Toward CAI**
Room: **Norway, Club Floor**

Computers are beginning to revolutionize instruction at all levels of education and are becoming particularly beneficial in teaching adults basic skills. However, we are still at the rudimentary stages in our knowledge of computers for instructional purposes. We need to know much more about teachers' and students' attitudes toward computers and the effects computers have on an adult's self-esteem and feelings about learning other skills, before computers can be fully adopted.

We recently did a study to determine the attitudes and perceptions of both teachers and students toward the use of computers, any changes in the students' attitudes, and to identify variables related to these changes. The study consisted of asking students at the two major literacy service providers in Philadelphia — the Center for Literacy and the Lutheran Settlement House — to fill out questionnaires and participate in interviews about their attitudes toward computers. Teachers of CFL and LSH were also interviewed.

The results of the study showed that students had favorable attitudes toward using computers even before they had experience with them. After using computers in classroom instruction, their attitudes increased at a modest rate. Students felt that using computers gave them greater self-confidence and a sense of improvement. (Since reading and writing skills are long-range and typing skills are more immediate, students felt that they benefited the most from becoming familiar with the computer.)

Students functioning at lower reading levels expressed the impact of computer usage in terms of "empowerment." One woman said, "I never thought I would have control over anything in my life . . . certainly not over a machine." Several others said that the computer made them think and that they were unaccustomed to having to think critically about issues. On the other hand, adults functioning at higher reading levels tended to view the computer as a tool. They could learn from computers, but they could also learn equally well from books.

The study also showed that teachers' reasons for adopting computers for instruction were both personal and organizational. Even teachers with positive attitudes toward computers and with skill in using them need assistance in integrating computers into their curriculum. Opportunities for instructing teachers in optimal uses of computer and in the availability of appropriate software need to be provided. Ideally, teachers should work through the software programs themselves before using them with students, so that they detect any potential problems and discover how to use the software with their students.

Access to computers by both students and teachers is also important. Allocation of financial resources to provide administrative support (for example, in released time for teacher inservice) is viewed by teachers as essential. Computer adoption in teaching literacy does not happen at once. Time is necessary to move through stages of adoption including awareness, interest, trial and error, and finally, integrating computers into the curriculum.

Saturday Sessions (10:30 - 11:30 a.m.)

Presenter: **Henry Dobson**
Strand: **Evolving Technology**
Title: **Repurposing Laserdiscs to Provide Visual Linkages for Adult Learners**
Room: **Fox Chapel, First Floor**

Interactive video learning combines the versatility of the microcomputer and television technologies into a powerful environment that creates a unique interaction between people and information. This enhancement of these technologies will herald the age of our third learning revolution — tools for the intellect.

Using one aspect of these tools for the intellect, educators can now repurpose many existing discs to provide the visual linkages needed for meaningful adult learning. They must create a learning environment that will deal with real problems having multiple or innovative solutions. In addition to this learning environment, activities are needed to develop analytical skills necessary to survive in a technological world. Currently, the videodisc marketplace contains hundreds of discs that have the potential for being repurposed to make learning integrated with the workplace and the community. Combining these discs with a simple interactive video system, educators can address the realities of illiteracy in America.

Many of our traditional adult-literacy programs imitate the practices of regular classrooms, teaching basic skills in isolation from the real world. Educational organizations are now spending a tremendous amount of time, money, and effort on obsolete learning systems that emphasize abstractions, process tons of words and retrieve a myriad of facts. Today, we possess the technology and understanding of contextual learning to change the direction of our educational programs to those that would raise the standards of literacy and make learning an enriching experience for all Americans.

Presenters: **June Eiselstein & Pam Makricosta**
Strand: **Parent & Intergenerational Literacy**
Title: **Libraries and Intergenerational Approaches to Literacy**
Room: **Oakmont, First Floor**

Public libraries pride themselves in offering a multitude of services — among them, literacy is an important aim of many libraries. The state library in Kentucky is one such library that made much headway when they helped form a literacy commission in 1985 (Kentucky was one of the first states to set up a statewide coalition of literacy). Among Kentucky's first projects was "Read to Your Child," a statewide campaign that encouraged parents to read to their children. In 1985, they prepared a bibliography titled "Good Books to Read to Your Child," a booklist for new adult readers. There are two versions of this booklist — a librarian and teacher's edition that lists reading levels and the annotated list for the students.

Many literacy programs and public libraries are just getting the feel for what microcomputers can do for them. LEAP, Literacy for Every Adult Project, is a volunteer literacy service of the Richmond Public Library, in Richmond California; LEAP's learning center is equipped with two Apple IIe's and a large number of commercially available pieces of educational software. The Mary H. Weir Public Library in Weirton, West Virginia, just 35 miles west of Pittsburgh, has a literacy program that uses 18 microcomputers.

The Lucy Robbins Wells Library in Newington, Connecticut, has a program that introduces parents and preschooler to microcomputers. Much of the software contains reading-readiness activities, so parent and child learn to use computers together while the child learns to read.

One library uses toys to entice young children to learn how to read. Called BABY-WISE, the Howard County Public Library in Maryland uses toys to complement the reading of books in the development of young children's literacy skills.

Presenters: **Anthony & Kathryn Ferralli**
Strand: **Evolving Technology**
Title: **Exploring the SV-I Connection**
Room: **Churchill, First Floor**

Interactive-videodisc based learning materials, geared toward adult literacy and basic skills, are beginning to surface from a variety of sources: private industry, universities, commercial vendors, and the federal government through Technology Transfer. However, there are are a number of roadblocks that inhibit the widespread use and subsequent benefits of this otherwise rich, available source:

1. Many of these videodiscs are too generic in nature and do not include necessary, relevant examples to make them useful in responding to the needs of specific audiences.
2. Many of these videodiscs have been produced for a narrow, targeted audience, and at first glance, do not appeal to a wider range of interests, even though with careful scrutiny, they contain potentially useful information.
3. Most of these videodiscs have been produced for specific hardware and software configurations and are not easily transportable to a variety of other configurations.

The solution to many of these problems can be found in the use of a new, interactive technology — Still Video-Interactive or SV-I. SV-I allows the in-house production of inexpensive, effective, and readily available interactive programs and materials that can be used in stand-alone fashion or as enhancements of existing videodisc materials. When coupled with random-access audio and simple authoring techniques, SV-I becomes the vital connection between the vast, available videodisc resources and the trainer, who must respond to the needs of a growing adult population.

During this session, conference participants will have the opportunity to learn the basics of SV-I technology and will participate in producing, on-the-spot, a simple, interactive SV-I program.

The experience will conclude with a Q & A session in which participants can exchange information concerning SV-I and brainstorm its potential applications in enhancing existing laserdisc programs and in creating stand-alone modules geared specifically to the adult learner's needs.

Saturday Sessions (10:30 - 11:30 a.m.)

Presenter: **Richard Gacka**
Strand: **Instruction**
Title: **Computerization of Client Assessment and Literacy Programming with an Adult Psychiatric Population**
Room: **Australia, Club Floor**

This presentation will demonstrate a comprehensive client-assessment program designed to enhance the coordination of residential, clinical, and educational services within an agency specializing in the treatment of an adult psychiatric population. The underlying model would be transferrable to any population since is is built upon commercially available software (*Excel, Word 3.0,* and *HyperCard*). Included in the overall system are modules that address the following:

a. initial client intake and status determinition
b. assessment of client risk factors
c. comprehension behavioral observation checklists
d. integrated, individual therapy plan development
e. a detailed academic-assessment design emphasizing criterion-referenced assessment
f. a self-teaching instructional module on how to use the system

The complete system is outlined in a written manual but utilizes a Macintosh system in implementing many of the system modules. Thus, the staff has available both a written structure to guide assessment from the initial intake through reevaluation as well as a computer-based system to reduce the clerical demands of implementing the program. At key decision points, such as the initial assignment of the client and development of his or her instructional plan, graphic summaries of the client's status are generated that help to clarify for the clinical team exactly what services the client needs. The intervention planning module gives staff full capability to individualize client objectives and relate those objectives directly to the assessment data. The system is used with a STAIRWAYS Pennsylvania Department of Education funded Act 143 literacy program, which utilizes the academic assessment modules as their core assessment program. The educational-assessment component can accommodate a client ability range from complete functional illiteracy to GED preparation.

Since the system is built upon commercially available software, the system's user's develop skills that are directly transferrable to other management applications such as client attendance, project budgeting, facilities management, etc.

The system is designed to continually evolve as staff members from caseworkers to administrators provide input into its design. The visual interface used by the system promotes ease of learning for staff who have had limited computer experience.

Presenters: **Lucy MacDonald & Richard Sparks**
Strand: **Evolving Technology**
Title: **Interactive Laserdiscs: What's It All About?**
Room: **England, Club Floor**

This workshop will introduce learners to the field of laserdiscs. A review of "laser lingo" will provide an explanation of terminology so that participants can read catalogues and articles and make informed decisions about the equipment and software needed in this emerg-

Saturday Sessions (10:30 - 11:30 a.m.)

ing and often confusing field. The workshop will clarify hardware requirements for the different computers, interfaces needed, and the variety of laserdisc players available. The intent of the workshop is to give the participants enough information so that they can begin to understand the world of laserdiscs

Presenters: **Paul Poledink & Jorie Lester Mark**
Strand: **Program Management**
Title: **Fitting the technical system into the corporate culture**
Room: **Parkview West, Club Floor**

Current workplace literacy programs, as well as programs for displaced workers and at-risk youth, emphasize context-specific learning and other basic principles including the use of technological tools such as computer-assisted instruction and interactive video. Technology is particularly valuable as a repetitional tool device (time on task).

While these approaches are absolutely essential for successful literacy training in a business or industrial atmosphere, additional consideration must also be given to the cultural, economic, and political systems in an organization if the training is to achieve maximum results. Likewise, the implementation of technology must be viewed in light of these factors. It is these additional considerations that I will explain.

Presenters: **Vicki Vance & Marguerite Raaen**
Strand: **Evolving Technology**
Title: **Project Literacy: An Interactive Video Solution to a National Dilemma**
Room: **Carnegie II, Club Floor**

Our presentation will explain a recent study that provides data indicating that Interactive Video programs can provide reading instruction for adults that can significantly raise their grade level scores in less time than conventional methods of reading instruction.

Using the *PALS* program from IBM and the *Reading for Electronics* program from Applied Learning International, both presented on the IBM *InfoWindow* Interactive Video Delivery system, adult users raised their grade-level scores from two to four grade levels within twenty-four hours of study.

Saturday Sessions (2:15 - 3:15 p.m.)

Presenter: **Brett Bixler**
Strand: **Staff Development**
Title: **Training Volunteer Tutors to use CAI**
Room: **Fox Chapel, First Floor**

This presentation will focus on specific methods used to prepare and train volunteer tutors to use computer-assisted instruction (CAI) with their students. These methods were derived from a research project coordinated by the Institute for the Study of Adult Literacy. Included in the presentation will be a demonstration of the Penn State Adult Literacy Courseware, which was used in the research project.

Saturday Sessions (2:15 - 3:15 p.m.)

Presenter: **William Correll**
Strand: **Software & Evolving Technology**
Title: **HyperAnimation: Come Face to Face with the Future**
Room: **Churchill, First Floor**
Vendor Session

Talk about user inter "face"s! Lifelike synthetic actors talk to you from the computer screen in HyperAnimation software by Bright Star Technology.

The expression "read my lips" sums up in three words the impact of this technology on the field of literacy education. *Alphabet Blocks,* the first product in the Bright Stare Montessori series, uses an animated elf, with realistic speech coordinated with the correct lip motions, to teach phonics and letter names. A digitized teacher in *Talking Tiles* shows how the pronunciation of words is related phonetically to their spelling. Interacting with the computer, the student manipulates simulated anagram tiles into words. Besides using the speech-synchronized animation techniques developed by Bright Star, these products are significant advances in literacy education in their own right. Both programs run on the Apple Macintosh computer and require only the mouse to run them, thereby eliminating problems of facing a keyboard for access.

Bright Star's HyperAnimation technology relies on its synthetic actor presentation and modeling system called the RAVE (Real-time Animation and Vivification Engine) and a special animation language, RAVEL. Together they enable a designer to ravel the patterns of human communications, unwinding an individual's body images and sounds into constituent parts, and specifying how these visual and audio threads are to be dynamically rewoven into the image and sound of that person or thing saying something else.

This new software technology automates rigorous coordination of images and speech sounds, letting programmers use synthetic actors like regular text-driven output devices. For ease of use, it has been incorporated in a stackware kit that lets *HyperCard* applications designers call up talking characters on the screen to present information.

Since the state of the art in host hardware is advancing so fast, considerable effort has been made to ensure the portability of the HyperAnimation tools. RAVE is written in structured C using a shell that isolates the code from its operating system platform. Special RAVEL statements define variations in new devices such as speech synthesizers and robot mouth mechanisms in order to minimize program modification.

RAVEL has a narrator device integrator function that can compile specification statements for the characteristics of any speech synthesis method, including digitized sounds. It includes integrated orthography- and phonology-encoding schemes designed to handle any human language or any set of visual symbols associated with sound, for synchronized text displays. The RAVE can manage multiple talking-characters at a time, with different voices and speaking different languages. Each synthetic actor model may employ any number of drawn, digitized, or parametrically-generated images related to each other, sounds, and in-betweens in a web of arbitrary complexity. The realism of synthetic actor portrayal using these techniques is essentially unlimited.

Saturday Sessions (2:15 - 3:15 p.m.)

Presenter: **Melvin Howards**
Strand: **Research**
Title: **The Technology of Literacy**
Room: **Sewickley, First Floor**

I will analyze adult literacy and technology on two levels — the literal and figurative. On the literal level, I will survey some of the typical technology used in adult literacy programs. On the figurative level, I will discuss technology and literacy in terms of how particular types of technology affect and influence the literacy programs and the the students in them. We know that any technology — radio, printing press, television, talking typewriters, computers, etc.—becomes a medium that transmits messages in its own unique fashion and defines and shapes the content being transmitted, as well as how the learner receives and responds to the message.

Each technology makes its own distinctive demands on learners in terms of how it sequences the skill and content in the message; in terms of how it presents facts, ideas, concepts — as individual parts, fragments, or in related wholes; and in terms of whether it is primarily visual or auditory or some unusual combination of the two.

Few researchers in adult literacy have demonstrated any interest in this dimension of technology's effects on literacy or on other forms of learning either. Bruner, Logan, McLuhan, Sapir, Whorf, Ong, and Postman, among others, make a a strong case for this interpretation; their view will be presented and analyzed. A fuller understanding of the dynamics involved in this process will assist us in planning and teaching more effectively.

Among the questions that need to be raised and answered, if possible, are the following: Are there certain types of content that can best be presented on television? Which types? For what students? In what circumstances and to what end? The same questions need to be asked about computer, as well as how the design and operation of this piece of technology affects the information it carries. For example, most computer programs are still linear rather than parallel or integrated. How does this affect the information?

I shall also offer a few examples of adult literacy programs that I have directed over the years, including my national television series for high school dropouts and adults.

Presenter: **Annabelle Lavier**
Strand: **Software**
Title: **Recommended Stand-Alone Software for 0-4 Learners Featuring Apple and IBM Family Software**
Room: **Oakmont, First Floor**

Adult literacy learners are the most difficult population to match with stand-alone software. Most literacy software that is available is produced for children. Not matching the unique needs of the adult learner, the software often uses inappropriate text or graphics. This session presents the findings of the Adult Basic Skills Technology Project, the subcontractor of the Adult Literacy Technology Project for software evaluation.

All recommended software received good to excellent ratings from at least two practitioners and their students and received further verification by the Adult Basic Skills Technology Advisory Board. In most cases, the software is being successfully used with adult learners.

Saturday Sessions (2:15 - 3:15 p.m.)

The recommended software includes programs that operate on Apple and/or IBM family computers that stand alone, and can be purchased on the open market. The recommended software ranges from public domain software at no charge to software that costs hundreds of dollars.

This demonstration will include a brief overview of software analysis as well as selected software with emphasis on the elements that make the programs successful with literacy learners. Techniques for successfully integrating the stand-alone software into curricula will also be discussed.

Presenters: **Lucy MacDonald & Richard Sparks**
Strand: **Evolving Technology**
Title: **Writing Laserdisc Lessons**
Room: **England, Club Floor**

This workshop will demonstrate how teachers and tutors can tailor videodisc information for their learners. Participants will learn how to use interactive videodics authoring systems to present lessons that are appropriate for their students, with an emphasis on how to take existing videodiscs and write curricula for them

Completed lessons will be analyzed so that participants can see how they work. These lessons are available on Apple, IBM, and Macintosh. Participants will learn how to build their own lessons and how to mold the lessons to the needs of their learners.

Our workshop will stress teachers and tutors creating curriculum materials, not programming. Also, this isn't a workshop about how to design a laserdisc; making existing laserdiscs more useful for learners, however, will be explained.

Presenter: **Elizabeth Metz**
Strand: **Research**
Title: **Using Consult-I (R): The Possibility of Consistent Treatment/Prescription for Adult Literacy**
Room: **Carnegie II, Club Floor**

One of the unsolved problems in the field of reading is the inconsistency of diagnostic predictions and treatment prescriptions among reading teachers and specialists. In a series of studies conducted by Vinsonhaler, Weinshank, Wagner, and Polin (1983), it was found that:

> Mean diagnostic agreement between two clinicians remained close to 0.10 across the six studies. Mean diagnostic agreement for a single clinician diagnosing the same case twice remained close to 0.20 across the six studies. In a study of remediation, the results for individual remedial agreement were similar to those for diagnosis. Further, remediations appeared to be uncorrelated with diagnosis (p. 134).

Advanced technology in the form of two computer programs, Outcome Advisor (R) and CONSULT-I (R), now offers the possibility of solving this problem. These two computer programs were developed by Edward Patrick, M.D., Ph.D., and James Fattu, M.D., Ph.D., and have proven highly successful in the field of medicine. CONSULT-I (R) is designed to prescribe treatments based on a wide array of individual characteristics, from which a person's high or low success rate in a treatment program can be predicted. Outcome Advisor (R) is the training tool for CONSULT-I (R). Artificial Intelligence, with statistical pattern recognition, (Patrick & Fattu, 1986) is used in both computer programs.

In 1983, the two programs were exclusively offered to the Reading Practicum Center at Indiana University for research in the area of remedial reading. Two taxonomies were developed: one for a K-12 database (n=180) and another for an adult database (n=45). Treatments with appropriate actions also were implemented based on the program at the Reading Practicum Center. A booklet containing specific strategies and suggestions for carrying out treatments was published. Early field study results from the K-12 database have shown the treatment prescriptions given by CONSULT-I (R) to be on target. A comprehensive field study is being planned for the 1988-89 school year.

Two projects have been initiated this year to expand the adult database. Through one project, we are building the database using learners in an adult basic education program at a local library. The other project involves the Indianapolis Alliance for Jobs. A treatment section is currently being developed. When the projects and treatment section are completed, success similar to that achieved by the K-12 database is expected.

Consistent treatment prescriptions through the use of CONSULT-I (R) could revolutionize the field of adult literacy. Instructions would become truly individualized as treatment prescriptions would be based on a given learner's characteristics. Adult educators would be able to complete taxonomies on individual learners, process them through CONSULT-I (R) at the Reading Practicum Center, and have them receive recommendations for treatments. Individualized instruction could then be carried out based on the treatment prescriptions. The problem of inconsistent treatment prescriptions would be solved.

Presenter: **Huck Roberts**
Strand: **Program Management**
Title: **Evolution of the Paperless Office: Database Management of a Literacy Agency**
Room: **Norway, Club Floor**

Management of literacy programs can be greatly facilitated by the appropriate use of computer technology. This presentation will focus on the use of a relational database to handle client tracking and program evaluation. The presentation will demonstrate how Pittsburgh Literacy Initiative currently uses database technology, as well as directions for its use in the future. There will be a brief explanation of the other ways (non-database) computers are currently being used by literacy agencies. This paper will stress both the benefits and pitfalls in the use of computer technology in the management of literacy programs.

Current Uses

The main emphasis will be the sample use of databases: client targeting, client tracking, and program evaluation. Included in each of these areas will be a discussion of their practical application at Pittsburgh Literacy Initiative in terms of form generation, database construction, data entry, memory management, backup procedures, and their impact on agency effectiveness. Also included in the discussion are the following: hardware and software considerations unique to databases, advantages of a relational database, and a listing of possible organizational uses (e.g., mailing lists, agency directories, etc.).

Client Targeting

Databases programs can be used to obtain demographical data, enabling more effective targeting of potential clients. Included will be a discussion of the advantages and problems inherent to data extrapolation by geographical area, sex, employment status, and race.

Client Tracking

One of the most obvious ways in which a literacy service provider can streamline program management is by using a database to store records, handle scheduling, and simplify client follow-up. However, blind reliance upon the computer can have its problems. The computer is a useful management tool, not a replacement for good management techniques.

Program Evaluation

This is perhaps the most difficult administrative function for a literacy agency to achieve without the use of a database. A relational database will greatly add to the agency's ability to demonstrate accomplishments and effectiveness, target weaknesses, and disseminate findings. How there functions can be accomplished and warnings regarding potential problems heeded will be covered.

Future Uses

Discussion will focus on "on-line" uses and cooperative data collection projects. "On-line" will include the use of databases for handling intake information, performing client screenings, making referrals, and doing follow-up. "On-line" uses will be demonstrated. In addition, a description will be given on how computers are currently being used in cooperative data projects and how they will be used in the future.

Cooperative Data Collection

West Shore Institute's data collection for the state of Pennsylvania will be used as an example of a project currently in place, and the Western Pennsylvania Data Collection Task Force will be discussed as an example of a project now evolving.

Additional Applications

While it is beyond the scope of this paper to discuss all of the ways in which computers are used by literacy agencies, there will be a brief discussion of those functions that could be used in conjunction with a database. For example, topics such as the uses of desktop publishing and presentations, and spreadsheets will be covered as they apply to databases. Sample of these materials will be used to illustrate their usefulness.

Presenters: **Ronald Scheer & Kathryn Badalich**
Strand: **Document Readability**
Title: **Simplifying Documents and Computer-Aided Design**
Room: **Australia, Club Floor**
Vendor Session:

Over the years, Siegel & Gale has developed a method for document simplification based on careful analysis of users' needs, system constraints, and techniques for communicating clearly with plain language and effective graphic designs. The introduction of computer-aided design has transformed the way we work and the range of services we offer our clients. It also has expanded the design capabilities of people who create their own functional documents. However, without appropriate user-testing, it is difficult for the nonexpert to determine whether a design effectively serves its intended function. We will present a case history of a recent form-design project that yielded potentially misleading results at the user-testing stage.

Saturday Sessions (2:15 - 3:15 p.m.)

Presenter: Macey B. Taylor
Strand: Instruction
Title: CALL in the Library
Room: Canada, Club Floor

The objectives of this presentation are (1) to describe briefly a computer Assisted Language Learning (CALL) project in place in a branch library; (2) to outline ways in which such projects can help meet the need for opportunities to learn English, become literate, and learn valuable job skills; and (3) to take a look at the immediate future and possibilities for increasing the number and scope of such projects.

The presenter will give an overview of an ESL project initiated by the Director of the Mission Branch of the Tuscon Public Library; Community experts in ESL, Adult Eduction, and CALL were involved from the inception of the project. She will discuss in greater detail the implementation of the microcomputers, emphasizing the workshops and individual training provided for both libraries and teachers, the selection of software, and the follow-up consultations found necessary, Finally, she will sketch the numerous possibilities that presently exist and could be implemented with small expenditures and the new and emerging technologies most appropriate for consideration in settings of this type. Throughout the presentation, the rationale for providing language and literacy learning opportunities in public facilities will be stressed.

Questions, comments, and contributions from the audience will be encouraged. A selected, annotated bibliography will be provided.

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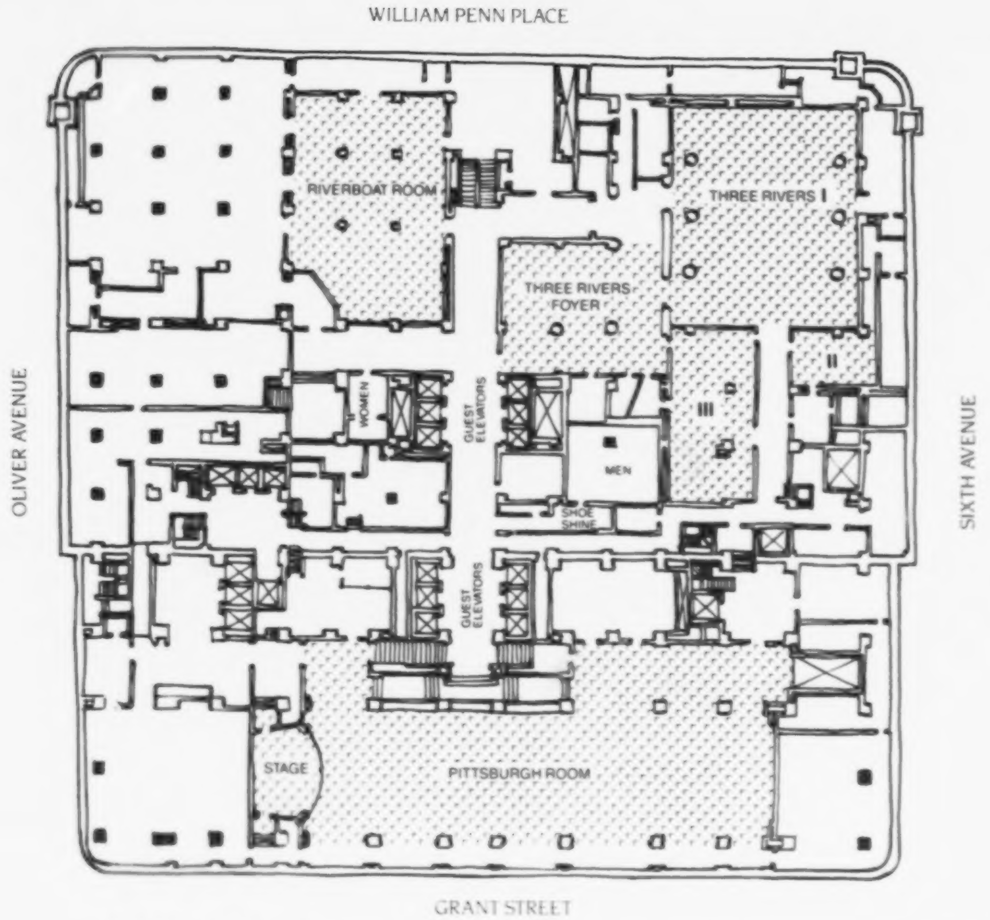
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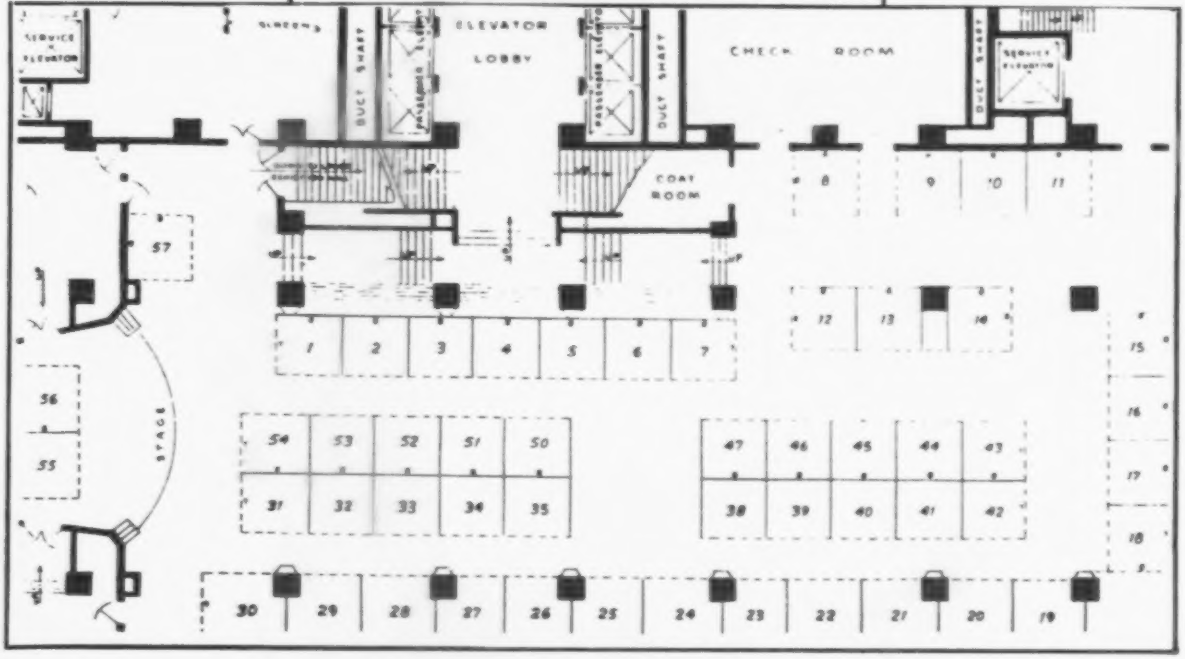
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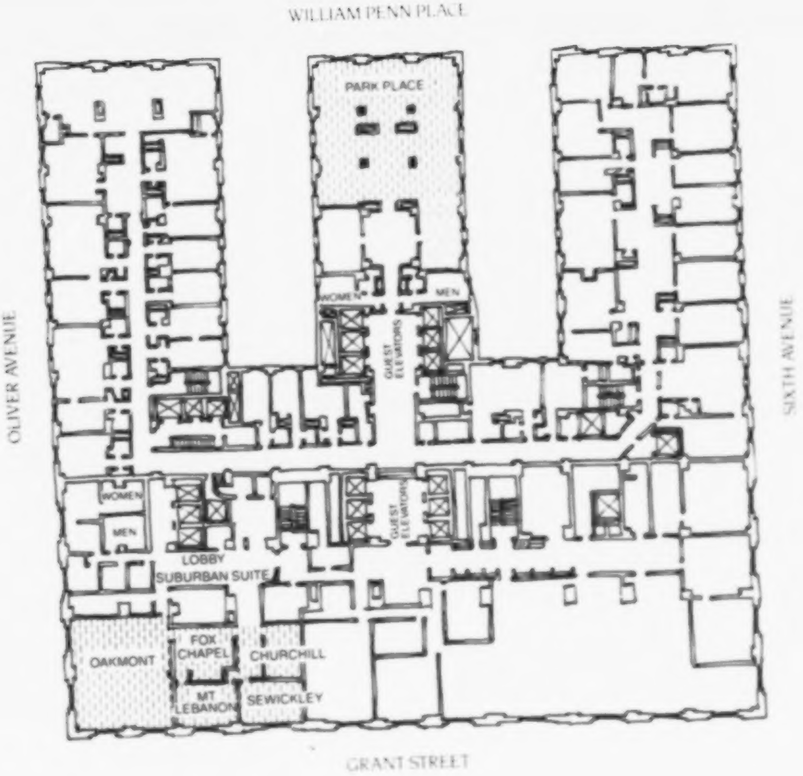
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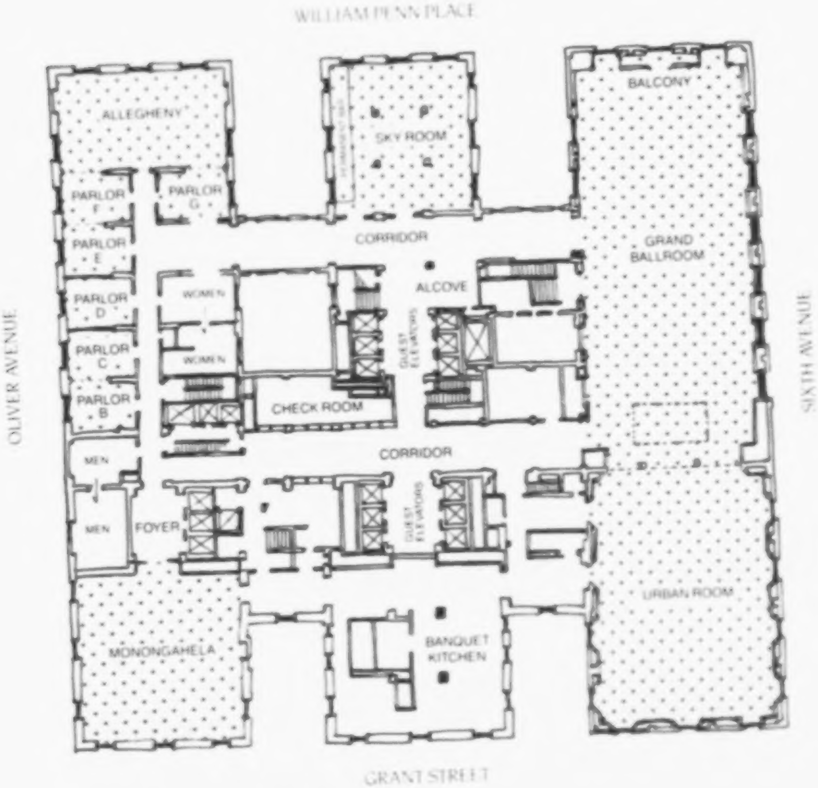
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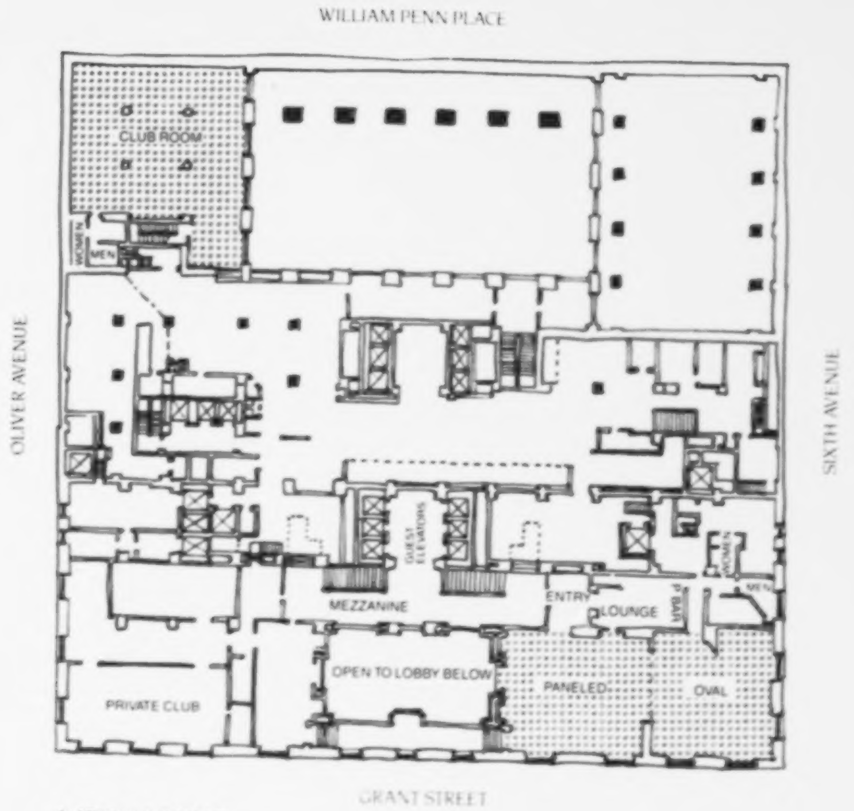
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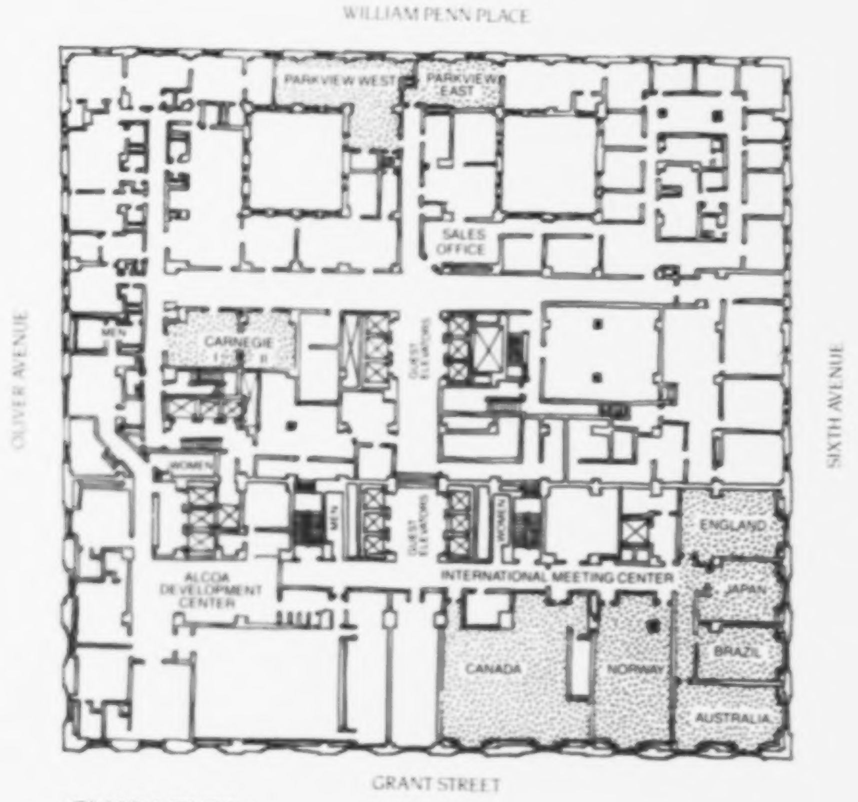
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Adult Literacy & Technology Goals

To support development of technology in adult literacy programs, applying the unique capabilities fo technology to the areas of management and instruction, and helping to provide solutions for the national problem of functional literacy.

To create an effective dissemination system which will provide technology, including selection of hardware and software, training, recommendations for adult literacy programs.

To support these goals, the Adult Literacy and Technology Project offers services to literacy providers. These services include:

Consulting service from "Technology Consultants," experts in the use of technology in adult literacy programs who were selected and trained to serve as consultants to the general public. A complete list of the Technology Consultants is listed in this program.

Video and print training modules in uses of technology in adult literacy. The videos include four different areas of instruction: "Introduction to Technology, "Software," "Hardware," and "Applications." The videos are available for purchase through the Adult Literacy and Technology Project.

A quarterly newsletter, *Adult Literacy & Technology Newsletter*, which communications current information about programs, evolving technology, and commentaries on technology in adult literacy programs. The newsletter is available by paid subscription.

Technical reports designed for service providers. Reports in progress: *Evaluating Technology in Literacy Programs* and *How to Set Up a Computer Lab for Literacy.*

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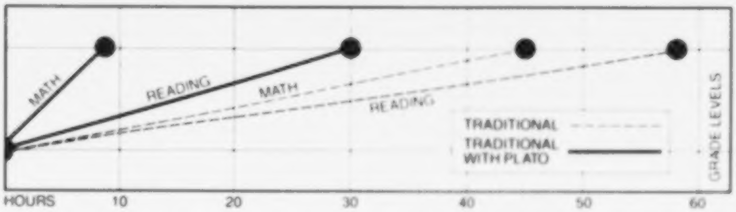

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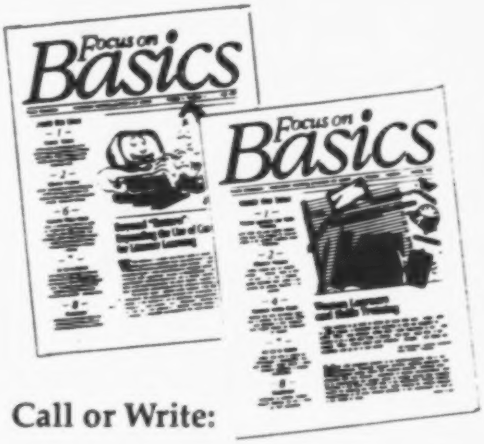

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